United States Court of Appeals

for the Second Circuit

APPENDIX

76-7284 & 76-7297

B

P/S

United States Court of Appeals

For the Second Circuit

NAVIEROS OCEANIKOS, S. A., owner of the Liberian Vessel TRADE DARING,
Plaintiff-Appellant-Appellee,

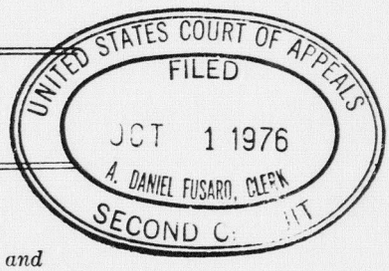
against

S. T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the owner of the MOBIL TRADER, and MOBIL SALES & SUPPLY CORPORATION,
Defendants and Third-Party Plaintiffs-Appellees-Appellants,

against

TRADE & TRANSPORT, INC.,
Third-Party Defendant-Appellee.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK.



APPENDIX.

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INDEX TO APPENDIX.

	Page
Docket Entries	1a
Opinion of Hon. Henry F. Werker	5a
Plaintiff's Notice of Motion for Reargument	17a
Affidavit of Theodore P. Daly in Support of Motion	19a
Plaintiff's Proposed Additional Findings of Fact in Support of Motion	27a
Memorandum and Order Endorsed, Entered May 17, 1976	29a
Plaintiff's Notice of Appeal	30a
Defendant and Third-Party Plaintiff, Mobil Oil Corporation's Notice of Appeal	32a
Excerpts From Transcript	34a

TESTIMONY.

PLAINTIFF'S WITNESSES:

Argyriadis, Doros A.:	
Direct	51a
Cross	53a
Redirect	99a
Recalled:	
Direct	393a
Cross	407a

Page

Blackeby, John R.:

Direct 35a

Redirect 36a

White, Thacher W.:

Direct 37a

Cross 50a

DEFENDANTS' WITNESSES:

Banks, Herbert William:

Direct 292a

Cross 326a

Redirect 343a

Halboth, Henry C.:

Direct 182a

Cross 199a

Redirect 228a

Recross 232a

Maclean, Walter C.:

Direct 107a

Cross 108a

Redirect 156a

Recross 171a

Page

Milano, Tranquillo Cristoforo:

Direct 345a

Cross 359a

Redirect 390a

Recross 392a

Neal, Phillip:

Direct 242a

Cross 243a

Redirect 291a

UNITED STATES COURT OF APPEALS,

FOR THE SECOND CIRCUIT.

- -X

NAVIEROS OCEANIKOS, S. A., owner of the Liberian Vessel Trade Daring,

Plaintiff-Appellant-Appellee,

-against-

S. T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the owner of the Mobil Trader, and MOBIL SALES & SUPPLY CORPORATION,

Defendants and Third-Party Plaintiffs-Appellees-Appellants,

-against-

TRADE & TRANSPORT, INC.,

Third-Party Defendant.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK.

- -X

DOCKET ENTRIES.

Date	Proceedings
1972	
Apr. 23	FILED COMPLAINT. ISSUED SUMMONS.
Apr. 23	FILED NOTICE OF ASSIGNMENT. J. TYLER.
Apr. 17	Filed summons with marshal's return. Served Mobil Oil Corporation by George D. Frost on 4/4/72. Aso served: Mobil Sales & Supply Corp. by George Frost on 4/4/72.

DOCKET ENTRIES

Date	Proceedings
Jun. 8	Filed Vouching in notice. by dfts.
Jun. 8	Filed ANSWER.
Jun. 8	Filed 3rd pty complaint.
Jul. 13	Filed Summons with Marshals Return. Served Trade & Transport, Inc. on 7-6-72
Jul. 13	Filed Vouching in Notice by Attys for defts. S.T. Mobil Trader, Mobil Oil Corporation, and Mobil Sales & Supply Corp. with Marshals return Served Trade & Transport Inc. on July 6-72
Sep. 13	Filed third party deft's ANSWER to third party complaint
Oct. 24	Filed Interrogatories Propounded by Pltff to Defts and 3rd Party Pltffs.
Dec. 8	Filed Claimants, Joseph Markovits, Inc. et al. ANSWER to Complaint.
1973	
Jun. 22	Filed ORDER: Ordered that the defts. and third party pltfs. shall make discovery by firnishing complete answers to interrogatories within 60 days. ENTERED. TYLER, J. (Order consented to)
Jun. 13	Filed notice of motion ret. 6/22/73 before Tyler, J. at 10AM Room 500 re: compel discovery. (Memorandum of law in support of pltff's motion.)
Aug. 3	Filed deft. 3rd. pty. pltff's answers to interrogs.
1974	
Apr. 17	Filed Pltff's Notice to Take Deposition (Oral) of Deft. Mobil Oil Corp.
1975	
Mar. 5	Filed notice of change of address of Poles Tublin to 46 Trinity Place, NY
Mar. 6	Reassigned to Pollack, J. (mn)

DOCKET ENTRIES

Date	Proceedings
Mar. 31	Pre-trial before Pollack, J.
May 26	Pre-trial before Pollack, J.
Jun. 20	Filed notice of reassignment to Werker, J. m/n
Jun. 24	Filed deft. Mobil Oil Corp. and Mobil Sales & Supply Corp.'s notice to take depositions of Cdr. Peter J. Cronk U.S.C.G. on 6-25-75
Jun. 30	NON-JURY trial begun before Werker, J.
Jul. 1	trial continued
Jul. 2	trial continued and concluded - Decision reserved. findings and conclusions to be submitted. -- Werker, J.
Sep. 18	Filed Transcript of record of proceedings dated June 30, 1975 & July 1, 2, 1975
Nov. 20	Filed pltff.s notice of taking deposition of Cesare Del Greco.
1976	
Feb. 27	Filed pltf's proposed findings of fact and conclusions of law.
Feb. 27	Filed defts' and 3rd pty pltf's findings of fact and conclusions of law.
Feb. 27	Filed pltffs. post trial brief.
Feb. 27	Filed plaintiff's reply brief.
Feb. 27	Filed post trial brief of Mobil Oil Corporation and Mobil Sales & Supply Corporation.
Feb. 27	Filed undisputed and disputed proposed findings of ultimate facts.

DOCKET ENTRIES

Date	Proceedings
Feb. 27	Filed OPINION #43972...Jurisdiction exists in this court; plaintiff was in part at fault for reasons stated herein: The Trader was in part at fault in that its pumpman did not execute the order give by 3rd engineer. The combined negligence on the part of plaintiff in 2(c) and (d) herein are such that the responsibility for the damages may not be placed solely on defendants. I have concluded that there is an ambiguity since the contract nowhere mentions damage to the vessel itself as a result of the events mentioned but appears rather to contemplate claims by those other than the ship to be supplied. Sales is not entitled to be indemnified by Transport or Oceanikos. THE THIRD PARTY COMPLAINT IS DISMISSED. Mobil is not entitled to limitation of liability. The relative liability of the parties is fixed at 75% Oceanikos, 25% Mobil, Trader, and Sales. The above shall constitue the findings of fact and conclusions of law. The parties are directed to confer with respect to damages and to define and submit to the court within 60 days from the date hereof a pre-trial order setting forth those items of damage which are disputed, etc. --Werker, J. m/n
Mar. 9	Filed plaintiffs affdvt. and notice of motion for reargument and to amend court's opinion of 2-27-76 -- ret. 3-29-76
Mar. 9	Filed plaintiffs memorandum in support of motion to reargue.
May 17	Filed defts reply memorandum of law.
May 17	Filed defts reply affdvt. of Louis C. Juliano.
May 17	Filed memo endorsed on pltfs motion filed 3-9-76; Denied in all respects -- Werker, J. m/n
Jun. 10	Filed pltf's notice of appeal to the USCA for the 2nd Circuit from order of 5-17-76 denying motions for additional and amended findings. copy mailed to Bigham Englar Jones & Houston, Esqs.

OPINION OF HON. HENRY F. WERKER.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

COPY

NAVIEROS OCEANIKOS, S.A., owner of the Liberian Vessel Trade Daring,

Plaintiff,

- against -

S. T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the owner of the Mobil Trader, and MOBIL SALES & SUPPLY CORPORATION,

Defendants and Third-Party Plaintiffs,

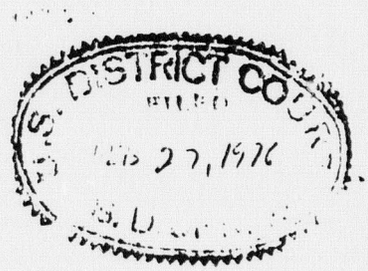
- against -

TRADE & TRANSPORT, INC.,

Third-Party Defendant.

OPINION

72 Civ. 1223 (HFW)



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BY: Donald M. Waesche, Jr. and Louis G. Juliano
Of Counsel

HENRY F. WERKER, D. J.

In the early morning hours of March 18, 1971 a fire broke out on board

the Liberian tanker M/V Trade Daring. The damage which ensued resulted in the vessel being termed a "constructive total loss." This action was brought to determine responsibility for the fire and resultant damage.

The plaintiff Navieros Oceanikos (Oceanikos) is a corporation incorporated in the Republic of Panama and was the owner of the Liberian flag vessel Trade Daring (Daring).

Defendant Mobil Oil Corporation (Mobil) is incorporated in the State of New York and was the owner of the S.T. Mobil Trader (Trader).

Defendant Mobil Sales and Supply Corporation (Sales) is a corporation incorporated in the State of Delaware and on January 1, 1971 had entered into a marine fuel oil sales contract with Trade & Transport, Inc. (Transport) to furnish fuel and diesel oil to vessels specified by Transport.

The third-party defendant Transport is a corporation incorporated in the State of New York and was the agent employed by Oceanikos on behalf of the Daring to arrange for the bunkering of the vessel during all relevant times.

The Daring was built in 1955 as a combination oil and ore carrier according to the construction standards of the American Bureau of Shipping and Germanischer Lloyd, the classification societies which establish and administer those standards. Oceanikos discontinued classing the vessel with Germanischer Lloyd when it purchased the vessel. At the time of the fire it was classed solely with the American Bureau of Shipping. The Trader is a self-propelled steel tank barge built in 1967 and was employed by Mobil for general bunkering service. It has four cargo tanks subdivided into eight compartments.

At the time of the fire on March 18, 1971 the design, construction and condition of the fuel oil tanks, including deep tanks, service and settling tanks, the overflow tanks and the venting, overflow and save all systems of the Daring were in

full compliance with the classification requirements of the American Bureau of Shipping. She was fully in class. Furthermore the design, construction and condition of the Daring's vent full transfer and save all systems were in conformity with good engineering design and practice and with the laws or regulations pertaining to this vessel.

The vessel because it was constructed in 1955 was not subject to the Safety of Life at Sea Convention (1960) (Solas - 1960) but the fire fighting and safety equipment of the Daring was in full compliance with the convention.

The engineering personnel aboard the Daring were not licensed under the laws of Liberia as they were required to be.

On March 16, 1971 the Daring arrived at the port of New York with a cargo of fuel oil to be discharged at the Hess Oil Terminal, Perth Amboy, New Jersey and completed discharge of the cargo March 17, 1971. On or about the same day Mobil was requested by Sales to deliver diesel fuel oil to the Daring and it dispatched Trader to effect the delivery. On March 17, 1971 at 1300 hours Trader was sent to Port Mobil where she loaded 25/26 tons in port tank #1 and a total of 349 tons in starboard and port #3 tanks for an aggregate amount of 375 tons of diesel fuel.

Bunkering of the Daring was scheduled for 1930 hours on March 17, 1971 at the Hess Oil Terminal, Perth Amboy, New Jersey. The Trader left Port Mobil at 1900 hours and made fast to the Daring starboard side to starboard side at 1920 hours. Bunkering was delayed because the Daring had not completed discharge of her cargo. Regulations at the terminal prohibited bunkering during discharge operations.

The fuel oil hoses were taken aboard the Daring and connected at 2220 hours on March 17, 1971.

OPINION OF HON. HENRY F. WERKER

The pumps of the Trader could pump a maximum of 200 tons per hour at the maximum rate of 1500 rpm's or 3 1/3 tons per minute.

Tranquillo Milano (Milano), the pumpman on the Trader, commenced pumping bunkers at 2250 hours. He commenced pumping bunkers from No. 1 port tank slowly to insure that the lines were secure and that there was no back pressure.

The pumping speed was increased to 1500 rpm's and bunkering from No. 1 port was completed no earlier than 2310 hours. The engine was slowed to 1000 rpm's to strip No. 1 port. It takes 2-3 minutes to strip a tank. After stripping No. 1 port Milano went aft, closed the two cross over valves and commenced pumping from No. 3 port and No. 3 starboard tanks at the rate of 200 tons per hour. The time was no earlier than 2310 hours.

In his direct testimony Milano claimed that he completed bunkering at 0042 hours. This is chronologically impossible if he commenced bunkering from port and starboard #3 at no earlier than 2310 hours. It would have taken 1 hour and 45 minutes to pump out the 349 tons of fuel in those tanks at 200 tons an hour and, at the least, 4 minutes to strip the tanks. This would put the time of completion at 0059. The statement by Milano given to Mobil's marine counsel shortly after the fire was to the effect that starboard No. 3 was stripped at 0045 hours. The statement recites "at 0045 Milano began stripping tanks first the starboard and then the port, and started blowing the line." Assuming stripping took 2 minutes for each tank this would place completion at 0049. If it took 3 minutes for each tank the time would be 0051. Taking either set of figures based upon chronology or upon the testimony of Milano I find that the bunkering was probably not completed until sometime between 0051 and 0059 hours.

At 0042 hours on March 18, 1971 the third engineer of the Daring

ordered the pumpman of the Trader to stop pumping bunkers into the Daring, but the pumpman failed to comply with the order.

At 0050 hours on March 18, 1971 the master and third engineer of the Daring again attempted to order the Trader to stop pumping bunkers into the Daring, but the Trader had no one in the proper station to immediately receive or execute such an order. After a brief time the pumpman appeared on deck of the Trader and apparently carried out the order. The time of the commencement and completion of bunkering of the Daring as indicated on the delivery receipt by Captain Banks had been altered.

On March 18, 1971 Captain Cesare Del Greco, master of the tug, Grace McAllister, was assigned to undock the Daring at 0100 hours. He departed the Grace McAllister at approximately 0045 hours and went on to the dock at the Hess terminal. After a brief conversation with some Hess personnel on the dock he ascended a pilot ladder hanging from the port side of the Daring and proceeded to the starboard side to see if the bunkering barge was still alongside. He looked over the side and saw no one on the deck of the Trader. He saw and heard at least one engine running at high speed. He also saw the hose connected between the Daring and the Trader swinging around violently fore and aft and up and down in the saddle. He then turned around, walked 15-20 feet from the starboard side when he observed "two big balls of fire" coming out of the skylights near the stack on the stern of the Daring. No more than 30 seconds had elapsed from the time he boarded the Daring until he saw the balls of fire.

The fire broke out on the Daring at about 0052 hours on March 18, 1971 when bunkers overflowed from the bunkering tank system of the Daring into the engine room and were ignited. Just before the fire, oil was observed overflowing from a catch basin of the gas oil tank onto No. 3 electrical generator in the lower

level of the engine room by Second Engineer Spetsiotis. He ordered Third Engineer Bafaloukos to cover the generator with a raincoat or tarpaulin and attempted to de-energize the generator to cool it as a source of ignition. At that point the fire broke out around the generator. Bafaloukos and Spetsiotis proceeded to close the vents, skylights and portholes of the engine room and at that moment there was a blackout. The crew took steps to fight the fire with hand extinguishers but due to the magnitude of the fire and the danger of the explosion their efforts were useless and they were forced to abandon the engine room. The foam system which was adequately supplied could not be brought into operation because the emergency diesel generator which activates the pumps was inaccessible due to the rapid spread of the fire. There is no question that the fire was of a flash nature which spread with great acceleration. All of the actions taken by the crew were proper considering the circumstances and nature of the fire. The regulations of the United States Coast Guard did not require a carbon dioxide system for the engine room.

During the course of the bunkering operation it was the duty of Third Engineer Bafaloukos to observe the level of the fuel through the cover of the side tanks being filled. It was his testimony that he gave the signal to stop bunkering when the fuel reached the second rung of the ladder which was installed in the manhole. This rung was below the overflow pipe of the side tank. I accept his testimony and find that he did give the signal at 0042 hours before the fuel had reached the overflow pipe. However after he gave the signal and without waiting to see if the order to stop bunkering had been executed or indeed acknowledged he left his post at the bunkering manifold to perform other duties in connection with the departure of the vessel. The order was not executed by the pumpman on the Trader. Bafaloukos was absent from this post about 8 minutes. Upon his return and after he became aware of the overflow he and the master attempted to get the

bunkering stopped at 0050 hours. At the pumping rate of 3 1/3 tons a minute approximately 26 2/3 tons of fuel would have been pumped during that 8 minutes. This was more than enough to fill the vessel's overflow tanks which had a capacity of only 23.2 tons of fuel and to leave an excess of 3.4 tons. It is significant that the vessel reported only having 165 tons of bunkers at the time it ended its voyage while in fact it had some 200 tons. Thereafter the master using 540 tons as the total capacity of the vessel's fuel tanks ordered 375 tons. Trade and Transport ordered 375 tons. Accordingly the delivery of 373.8 tons loaded and delivered by Trader meant that an excess of 2.8 tons had to find egress somwhere. The excess found egress through the save oil pipelines into the save oil basins and thus flowed into the engine room. There has been much testimony as to whether the vent lines were altered. I find that they were not. There has also been some testimony that no valves were observed on the save oil pipe lines. I do not find that convincing. The plaintiff's expert testified that there were such valves and his testimony is accepted. It is fairly obvious that such valves were not closed; otherwise the spill could not have occurred. This was the lowest point at which the fuel under head could escape. If those valves had been closed the fuel would have escaped through the vent lines which opened to the decks of the vessel. I do not accept the theory that the spill occured from the gas oil side tanks. It appears to me that if Bafaloukos had left the gas oil valve open the spill would have occured at a much earlier point in time.

In the light of Milano's first statement given to Mobil's marine counsel as to the time when he completed bunkering I do not find Captain Bank's statement that Milano called to him that there was a clean delivery at about 0042 hours persuasive. Certainly this may have been done within the time from 0045 to 0052-59 but I cannot find with any certainty given the exigent circumstances that

the witnesses on either side of this controversy could state with certainty the exact times when they did certain things. Captain Banks was aboard the Daring when the fire broke out. He claims it started at about 0052. He never delivered the receipt which as I have already indicated was altered by erasure and not satisfactorily explained. Given the circumstances in this case it is perhaps excusable human nature to attempt to protect one's own interests. I find that both sides' witnesses have attempted to do so.

I also find that the lighting on the Trader was such as to make personnel on the deck visible and that Milano left his post to communicate to Captain Banks at some point between 0045 and 0050.

It is clear that the third engineer on board the Daring had the ultimate control of this bunkering operation. He had the obligation to communicate with the pumpman as to when the bunkering should be completed. He also had the duty to make sure that his order was carried out. The Daring was equipped with valves at the bunkering manifold and in the engine room which would have permitted the third engineer to shut off the bunkering. These were not used even after the overflow was evident. No satisfactory explanation was given for this excepting the reliance of the third engineer upon his visible observation through the manhole cover on a poorly lighted deck rather than his or someone else's observation of the amount of bunkers through the sight glasses through which he ultimately observed the overflow.

The ullages which were observed in the side tanks weeks after the casualty were such that they were below the overflow pipes in the side tanks. These were satisfactorily explained by plaintiff's naval architect whose opinion as to shrinkage due to the fire is accepted. In addition the port side tank leaked as a result of damage.

OPINION OF HON. HENRY F. WERKER

The third-party complaint is based upon a provision of the marine fuel oil sales contract entered into between Sales and Transport on January 1, 1971 which provided inter alia that Transport:

> "warrants that each vessel will be properly equipped, maintained, and operated so as to avoid leakage, spillage, overflow or water or land pollution and shall hold Seller and its supplier harmless and indemnify Seller and its supplier against any claim, action, suit, assessment, fine, levy, penalty or exaction of a like nature instituted by any person (including public authorities) resulting from any such alleged leakage, spillage, overflow, or water or land pollution asserted or assessed against Seller or its supplier on the ground of damages alleged to have resulted from any such alleged leakage, spillage, overflow, or water or land pollution, except insofar as it shall be established that such damage resulted exclusively from negligence of Seller or its supplier."

Oceanikos was the disclosed principal of Transport for purposes of this contract.

CONCLUSIONS OF LAW

1. Jurisdiction exists in this court under U. S. Constitution, art. 3 § 2, 28 U.S.C. § 1333, 46 U.S.C. § 740 and the general maritime law of the United States.

2. The fire and ensuing damage to the M/V Trade Daring was caused in part by the fault of the plaintiff Navieros Oceanikos, S.A. by reason of the following:

(a) It failed to close the safe oil pipe line system during bunkering which would have vented vapors and overflow of diesel fuel oil onto the open deck through the normal vent system rather than into the engine room.

(b) It failed to man its vessel in accordance with the manning requirements for a vessel of the type of M/V Trade Daring promulgated by the Republic of Liberia.[1]

(c) It failed to train the unlicensed engineering personnel with respect to a standard operating procedure in the event of an overflow with respect to this particular vessel as evidenced by the failure of the third and second engineer to close the main intake valve on deck or in the engine room in sufficient time to prevent the overflow.[2]

(d) It failed to order the amount of bunkers actually required by the vessel, thus creating the false expectation that the amount of bunkers ordered could be pumped aboard the vessel without casualty.

3. The Trader was in part at fault in that its pumpman did not execute the order given by third engineer Bafaloukos to discontinue bunkering and continued to pump after the order was given, in breach of the duty to perform the bunkering service in a diligent and workmanlike manner.[3]

4. Although conclusion 3 above demonstrates a breach of the duty to perform the bunkering service in a diligent and workmanlike manner, the combined negligence on the part of plaintiff in 2(c) and (d) above are such that the responsibility for the damages may not be placed solely on defendants.[4]

5. The warranty contained in the contract between Sales and Transport appears in the absence of any evidence to the contrary to be directed at protection against environmental claims, not damage to the vessel itself.[5]

6. Contracts of indemnity are to be strictly construed if there is an ambiguity.[6]

7. I have concluded that there is an ambiguity since this contract nowhere mentions damage to the vessel itself as a result of the events mentioned but appears rather to contemplate claims by those other than the ship to be supplied.

8. Sales is not entitled to be indemnified by Transport or Oceanikos.

9. The third-party complaint is dismissed.

10. Mobil is not entitled to limitation of liability.[7]

11. The relative liability of the parties is fixed at 75% Oceanikos, 25% Mobil, Trader, and Sales.

The above shall constitute the findings of fact and conclusions of law as required under Rule 52, Fed. R. Civ. P.

The parties are directed to confer with respect to the damages and to define and submit to the court within 60 days from the date hereof a pretrial order setting forth those items of damage which are disputed and to follow with respect to the evidence to be presented as to each disputed item the same procedure as was followed with respect to the issue of liability.

DATED: New York, New York

February 27, 1976

Henry F. Werker

U.S. D. J.

OPINION OF HON. HENRY F. WERKER

NAVIEROS OCEANIKOS, S.A. v. S.T. MOBIL TRADER, 72 Civ. 1225 (HFW)

NOTES

1. The applicable regulation reads in pertinent part:

"CHAPTER X. MERCHANT SEAMEN
10.292 Manning Requirements.
* * *
(2) Required Minimum Number of Engineers.
* * *
(c) Every Liberian vessel propelled by machinery of 1200 horsepower or greater shall have on board and in her service, in addition to her chief engineer, at least three assistant engineers, licensed in appropriate grades, who shall stand in three watches while such vessel is in navigation."

The Pennsylvania, 86 U.S. 125, 19 Wall. 125 (1874); The Denali, 105 F.2d 413 (9th Cir. 1939); Wilbur-Ellis Co. v. The M/V Captayannis S, 306 F. Supp. 866 (D. Ore. 1969), aff'd, 451 F.2d 973 (9th Cir. 1971), cert. denied, 405 U.S. 923 (1972).

2. The Pennsylvania, 86 U.S. 125, 19 Wall. 125 (1874); The Denali, 105 F.2d 413 (9th Cir. 1939); Wilbur-Ellis Co. v. The M/V Captayannis S, 306 F. Supp. 866 (D. Ore. 1969), aff'd, 451 F.2d 973 (9th Cir. 1971), cert. denied, 405 U.S. 923 (1972).

3. Ryan Stevedoring Co. v. Pan-Atlantic S.S. Corp., 350 U.S. 124, 133 (1956); Fairmont Shipping Corp. v. Chevron International Oil Co., Inc., 371 F. Supp. 1191 (S.D.N.Y. 1974), aff'd, 511 F.2d 1252 (2d Cir. 1975).

4. Pope & Talbot, Inc. v. Hawn, 346 U.S. 406 (1953); Houston-New Orleans, Inc. v. Page Engineering Co., 353 F. Supp. 890 (E.D.La. 1972).

5. Assets Realization Co. v. Roth, 226 N.Y. 370, 123 N.E. 743 (1919).

6. Luddington v. Pulver, 6 Wend. 404 (1831); Fugate v. Greenberg: Publisher, 16 Misc. 2d 942, 189 N.Y.S.2d 948 (Sup. Ct. 1959); Ratigan v. New York Central Ry. Co., 181 F. Supp. 228 (N.D.N.Y. 1960), aff'd, 291 F.2d 548 (2d Cir. 1961), cert. denied, 368 U.S. 891

7. Cullen Fuel Co. v. Hedger Co., 290 U.S. 82 (1933); The Spare Time II, 28 F. Supp. 519 (E.D.N.Y. 1938); Gilmore and Black, The Law of Admiralty §§ 10-26 (2d ed. 1975).

PLAINTIFF'S NOTICE OF MOTION FOR REARGUMENT.

11,702 TPD/
FRM

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NAVIEROS OCEANIKOS, S.A., owner of the Liberian Vessel TRADE DARING, Plaintiff	
-against-	72 Civ. 1225 (HFW)
S.T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the owner of the MOBIL TRADER, and MOBIL SALES & SUPPLY CORPORATION,	NOTICE OF MOTION
Defendant and Third Party Plaintiffs,	
-against-	
TRADE & TRANSPORT, INC.	
Third-Party Defendant	

S I R S :

PLEASE TAKE NOTICE that upon the trial record and the proceedings heretofore had herein and upon the annexed affidavit of THEODORE P. DALY, sworn to the 8th day of March, 1976, the undersigned will move this Court before the Hon. HENRY F. WERKER at the United States Courthouse in Room 905, Foley Square, Borough of Manhattan, City of New York on the 29th day of March, 1976, at 10:00 o'clock in the forenoon thereof, or as soon as counsel can be heard, for an order pursuant to Rule 52(b) of the Federal Rules of Civil Procedure and Rule 9(m) of the General Rules of this Court amending the findings of fact in the Court's opinion dated and filed on February 27, 1976, herein, and making additional findings of fact and granting the plaintiff leave to reargue the decision of this Court and for such other and further relief as this Court deems just in the premises.

PLEASE TAKE FURTHER NOTICE, that all affidavits, memoranda and/or papers in reply hereto shall be served upon the

PLAINTIFF'S NOTICE OF MOTION FOR REARGUMENT

office of POLES, TUBLIN, PATESTIDES & STRATAKIS, in accordance with Rule 9 of the General Rules of this Court.

Dated: New York, New York
March 8, 1976

POLES, TUBLIN, PATESTIDES & STRATAKIS

By_____
A Member of the Firm
Attorney for Plaintiffs
Office & P.O. Address:
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AFFIDAVIT OF THEODORE P. DALY IN SUPPORT OF MOTION.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NAVIEROS OCEANIKOS, S.A., Owner of the Liberian vessel TRADE DARING, Plaintiff, -against- S.T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the Owner of the MOBIL TRADER, and MOBIL SALES & SUPPLY CORPORATION, Defendants and Third Party Plaintiffs, -against- TRADE & TRANSPORT INC., Third-Party Defendant.	72 Civ. 1225 Judge Werker AFFIDAVIT

STATE OF NEW YORK)
COUNTY OF NEW YORK) ss.:

THEODORE P. DALY, being duly sworn, deposes and says:

1. That he is a member of the firm of Poles, Tublin, Patestides & Stratakis, attorneys for plaintiff, and as trial counsel is fully familiar with all of the proceedings heretofore had herein.

2. This affidavit is submitted in support of plaintiff's motion under Rule 52(b) of the Federal Rules of Civil Procedure and Rule 9(m) of the General Rules of this Court for leave to reargue the decision of the Court made and entered herein on February 27, 1976, and for additional findings of fact by the Court.

In the portion of the opinion in which the Court expressly makes an apportionment of the liability of the parties, the Court states as follows:

> "11. The relative liability of the parties is fixed at 75% Oceanikos, 25% Mobil, Trader, and Sales."

It is respectfully submitted that this apportionment of the liability of the parties which appears to permit the plaintiff to recover only 25% of its damages is contrary to the uncontroverted evidence, to the other findings of fact

made by the Court and to the applicable law. The fault of the defendants was active and initiatory: it set in motion the chain of events that led to the fire. If the defendants' employee had not been negligent, the bunkering on March 18, 1971, would have been simply another routine bunkering operation in the 15 year history of the TRADE DARING.

The Court in its conclusions of law referred to four alleged faults on the part of the plaintiff: Conclusions of Law, No. 2, subparagraphs (a), (b), (c) and (d), at pages 9-10 of the Opinion.

Subparagraph (a) states as follows:

> "(a) It failed to close the safe oil pipe line system during bunkering which would have vented vapors and overflow of diesel fuel oil onto the open deck through the normal vent system rather than into the engine room."

This conclusion of law is based on findings of fact presupposing that the proper design of the vessel or proper operating procedures during the bunkering require provision to be made for a back-up or redundant safety system or a place for the excess bunkers to go after assuming the large capacity, 23 tons, of the overflow tanks is exhausted. There is no testimony supporting this proposition and the testimony of both the plaintiff's expert, Argyriadis on cross-examination and the testimony of the defendants' expert Maclean appears to negate any such requirement. Mr. Argyriadis testified on cross-examination as follows (Tr 51-52):

> "Q. But if one had a system which would permit an overflow to discharge directly into the engine spaces in an area above a generator, such a system would not conform to safe engineering practices, would it?
>
> A. Safe engineering practices--you mean ABS or general, sir?
>
> Q. Just general, just common sense.
>
> A. Would the overflow from the overflow tank? Well, we could have, sir, six overflow tanks, one right after the other and then, of course, it would make it even more safe.
>
> Q. That doesn't answer my question.

A. I know it doesn't but you are asking me to answer a question I can't really answer because the overflow tank is there to take care of an overflow.

Q. That is correct.

A. Now, to have a redundant overflow to an overflow is, I think, a bit more safe, more than safe engineering practices asks.

Q. I will rephrase it.

If a vessel has a system which would permit an overflow to take place directly in the engine room at a spot above a generator or an operating piece of machinery, would you say that such a system conforms with safe, generally recognized marine engineering principles?

A. Without an overflow tank or with?

Q. With an overflow tank.

A. I wouldn't consider that that unusual, sir.

Q. Would you consider that to be a safely designed system?

A. Yes, sir."

Dr. Maclean, defendants' expert testified to the same effect: he had never seen a redundant system on any vessel (Tr 154):

Q. Have you ever seen any requirement in any of the classification rules you have referred to requiring an overflow tank to handle the overflow from an overflow tank?

A. No.

Q. Your answer is no?

A. No.

Q. In commercial vessels, would it be economically feasible or even operationally feasible to construct such redundant back-up systems?

A. Well, I think economical feasibility is something that is subject to interpretation and question. It depends upon the purposes for which you intend to use the vessel, and one can economically justify many things, if the intent to do so is there.

Q. Have you ever seen the design of any vessel calling for an overflow tank to handle the overflow from an overflow tank?

A. No, I have not."

To put it another way, the overflow and resultant fire were caused by the defendants' active breach of their warranty of workmanlike performance; the alleged fault on the part of the plaintiff was in supposedly failing to go beyond the requirements of good engineering practice and anticipate that there would be a massive overflow caused by the defendants which would exhaust even the large capacity of the overflow tanks to handle. It is respectfully submitted that the failure to be that farsighted is not a fault and that if it were a fault it would not serve to reduce plaintiff's recovery under the applicable law. See Point II of the accompanying Memorandum Of Law.

The Court also found as a fault:

> "(b) It failed to man its vessel in accordance with the manning requirements for a vessel of the type of M/V TRADE DARING promulgated by the Republic of Liberia."

This is a purely technical fault that has been demonstrated to be causally unrelated to the overflow of bunkers and to the outbreak of the fire. This technical fault should not be given any significance other than in a special class of cases which does not include cases based on the breach of the warranty of workmanlike service. (See Point I of the accompanying Memorandum Of Law). This technical fault did not and could not have hindered or prevented the defendants from performing their duty of rendering workmanlike service. (See Point II of the accompanying Memorandum Of Law).

The Court also found as a fault on the part of the plaintiff the following:

> "(c) It failed to train the unlicensed engineering personnel with respect to a standard operating procedure in the event of an overflow with respect to this particular vessel as evidenced by the failure of the third and second engineer to close the main intake valve on deck or in the engine room in sufficient time to prevent the overflow."

AFFIDAVIT OF THEODORE P. DALY IN SUPPORT OF MOTION

It is respectfully submitted that there is no evidence to show that additional training of the engineering personnel would have prompted them to do anything other than what they actually did when confronted with the massive overflow caused by the defendants' breach of their warranty of workmanlike performance.

As soon as the third engineer, Bafaloukos, noticed the overflow, through the sight glasses that led from the side tanks to the overflow double-bottom tanks, he raced up the engine room stairway calling out in passing to the Second Engineer, Spetsiotis who immediately confirmed the overflow and ran to the control valve and closed off the central intake valve (Exhibit 47 at pages 6-8). As Spetsiotis put it, he closed the main intake valve below deck "even if the pipe burst". Exhibit 47 at page 8. Meanwhile, Bafaloukos ran to the main deck, called to the master on the middle accommodation deck to again order the barge to stop pumping and closed the main intake valve on deck himself. (Exhibit 45 at pages 32-33).

It is difficult to see that any degree of training could have resulted in these two engineers' doing anything other than what they did and there is no testimony* by any of the defendants' witnesses that anything further could have been done by the vessel's engineers when the overflow was discovered. In any event, this supposed fault could not be said to have actively hindered or prevented the defendants in the performance of their duties. (See Point II of the accompanying Memorandum of Law).

The final fault attributed to the plaintiff in the Court's opinion is:

> "(d) It failed to order the amount of bunkers actually required by the vessel, thus creating the false expectation that the amount of bunkers ordered could be pumped aboard the vessel without casualty".

The evidence is clear and uncontradicted and based on the testimony of defendants' own witness, Captain Banks, that the quantity of bunkers ordered should not create

*But see Tr 316-317; and page 61 of "Plaintiff's Post-Trial Brief"

any expectation that any given quantity could be pumped aboard the ordering vessel. It is quite common for vessels to order more bunkers than they might be able to carry so as to be sure that sufficient bunkers are brought to the vessel to fill her to capacity. Captain Banks admitted that a vessel's ordering more bunkers than it might be able to carry is a rather frequent occurrence in the port of New York.

Captain Banks testified as follows-(Tr 383):

"Q. Captain, why do vessels shut out cargo occasionally?

A. Basically because they can't take the product.

Q. And they order more than they can take, really?

A. Sometimes.

Q. It is common enough, isn't it?

A. Yes." (Emphasis supplied)

In fact during the period March 16-19, 1971 (the TRADE DARING was bunkered on March 17-18, 1971), according to the log book of the MOBIL TRADER, "shut-outs" occurred on March 16 and March 19 on bunkered vessels other than the TRADE DARING. Captain Banks testified as follows (Tr 379-380):

"Q. Looking at the dates March 16, 17, 18 and 19, can you tell us on how many occasions cargo was shut out from the Mobil Trader?

A. On March 16 we had a shut-out.

Q. And how much was that shut out?

A. 23,002 gallons.

Q. Do you know how many tons that would be?

A. Not offhand, no, sir.

Q. Do you have an approximation?

A. No, I don't.

Q. That was on March 16?

A. 16th, right.

Q. What about March 17, any shut-outs on that date?

A. No, sir.

Q. March 18, any shut-outs on that date?

A. No, sir.

Q. How about March 19?

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AFFIDAVIT OF THEODORE P. DALY IN SUPPORT OF MOTION

MR. JULIANO: I object. Irrelevant.

THE COURT: I will let him answer.

A. I have down here pumping, shut-out. Right.

Q. How much was shut out?

A. 27,110 tons.

THE COURT: Tons? Gallons?

A. Excuse me. Gallons, gross gallons."

In other words, the amount of bunkers a vessel orders should not create any firm expectation in the minds of the personnel bunkering vessel as to the quantity that can be received since the personnel should know full well that vessels frequently order more bunkers than they carry. In fact, as Captain Banks testified, there is a well-recognized signal, the signal Bafaloukos gave in this case to the pumpman, to order the halt of bunkering. Captain Banks testified as follows (Tr 380-381):

"Q. I believe you testified on direct examination that ordinarily when cargo is shut out by a vessel, which means it doesn't really want to take any more, I suppose, in ordinary course that is done by a signal from the personnel of the vessel to the barge, is that correct, in ordinary course?

A. Yes.

Q. And you did mention that in certain emergency situations, perhaps the vessel itself might close out?

A. Yes.

Q. In ordinary course it would be a simple waving of the hands, as I'm doing now, crossing the wrists back and forth, is that so?

A. That is right."

In view of the facts stated above and the applicable law set forth in the accompanying Memorandum of Law, it is respectfully submitted that the Court should grant the plaintiff's motion for leave to reargue the decision of the Court made and entered herein, February 27, 1976, and should make the additional "findings of fact" set forth in the annexed "Plaintiff's Proposed Additional Findings of Fact".

The negligence of the defendants was active and initiatory setting in motion the chain of events that led directly to the fire. The plaintiff did not hinder or prevent

the defendants in their performance of their duty to carry out the order to stop bunkering. Apportioning the defendants' liability at only 25% on the basis of the matters set forth in the Court's Opinion is, it is respectfully submitted, contrary to the law and the facts.

It is further submitted that the Court should provide for the settlement of a proposed interlocutory order on liability" in accordance with established admiralty practice in order that either party may, if it so decides, appeal from said order prior to the trial of the issue of damages

WHEREFORE, it is respectfully requested that the plaintiff's motion for leave to reargue the decision of the Court and for additional "findings of fact" by the Court be, in all, respects, granted.

Dated: New York, N.Y.
March 8 , 1976

THEODORE P. DALY

Sworn to before me
this day of
March, 1976.

Notary Public

PLAINTIFF'S PROPOSED ADDITIONAL FINDINGS OF FACT IN SUPPORT OF MOTION.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NAVIEROS OCEANIKOS, S.A., Owner of the Liberian Vessel TRADE DARING, Plaintiff, -against- S.T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the Owner of the MOBIL TRADER, and MOBIL SALES & SUPPLY CORPORATION, Defendants and Third-Party Plaintiffs, -against- TRADE & TRANSPORT INC. Third-Party Defendant.	Index No. 72 Civ. 1225 Judge Werker PLAINTIFF'S PROPOSED ADDITIONAL FINDINGS OF FACT

Plaintiff for its Proposed Additional Findings of Fact, states as follows:

FINDINGS OF FACT

1. It is not uncommon for vessels to order more bunkers from Mobil than the vessel can accept (Tr 383-384). During the four day period spanning the bunkering of the TRADE DARING, March 16-19, 1971, two other vessels had ordered greater quantities of bunkers than they actually received (Tr 379-380). When the receiving vessel wishes to "shut out" bunkers it declines to or cannot accept, it simply informs the barge by appropriate signal (Tr 380-381). Such signal was given by the TRADE DARING and acknowledged by the MOBIL TRADER before the overflow of bunkers on the TRADE DARING (Exhibit 45 at pages 25-27).

2. None of the faults charged to plaintiff in the Court's Opinion of February 27, 1976, were of a kind that hindered or prevented the MOBIL TRADER from executing the order to halt bunkering or hindered or prevented the defendants from carrying

PLAINTIFF'S PROPOSED ADDITIONAL FINDINGS OF FACT IN SUPPORT OF MOTION

out their duty of performing the bunkering operation in a workmanlike manner.

3. There is no credible evidence that, if a choice must be made, it is preferable to create an overflow on deck in the vicinity of a bunkering facility rather than in the engine room. In any event, sound engineering practice does not require any provision for the safe handling of an overflow other than by the overflow tanks. There is no requirement in the industry for redundant overflow systems (Tr 51-52; Tr 154).

Dated: New York, New York
March 8, 1976

POLES, TUBLIN, PATESTIDES & STRATAKIS

By _____
A Member of the Firm

Attorneys for Plaintiff and Third-Party Defendant
Office and P.O. Address
46 Trinity Place
New York, New York 10006
Tel: 212-943-0110

MEMORANDUM & ORDER ENDORSED, ENTERED MAY 17, 1976.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NAVIEROS OCEANIKOS, S.A., Owner of the Liberian vessel TRADE DARING,

Plaintiff,

-against-

S.T. MOBIL TRADER, her engines, etc.,

Defendants and Third-Party Plaintiffs,

TRADE & TRANSPORT, INC.,

Third-Party Defendant.

NOTICE OF MOTION, AFFIDAVIT and PLAINTIFF'S PROPOSED ADDITIONAL FINDINGS OF FACT

POLES, TUBLIN, PATESTIDES & STRATAKIS
Attorneys for Plaintiff & Third Party Defendant
Office and Post Office Address, Telephone
46 TRINITY PLACE
NEW YORK, N. Y. 10006
(212) 943-0110

To

Attorney(s) for

Service of a copy of the within is hereby admitted.

Dated,

Attorney(s) for

Upon due consideration of plaintiff's motion for an order pursuant to Rule 52(b) of the Federal Rules of Civil Procedure and Rule 9(m) of the General Rules of this court to amend the findings of fact and make additional findings of fact and granting plaintiff leave to reargue the court adheres to its original findings of fact and conclusions and denies the motion in all respects.

SO ORDERED.

May 13, 1976

U. S. D. J.

court on 19

is a true copy will be presented for one of the judges

M.

etc.

RIDES & STRATAKIS

Office Address
PLACE
NEW YORK, N. Y. 10006

To

Attorney(s) for

PLAINTIFF'S NOTICE OF APPEAL.

UNITED STATES DISTRICT COURT,

SOUTHERN DISTRICT OF NEW YORK.

- -X

NAVIEROS OCEANIKOS, S. A., owner of the Liberian Vessel Trade Daring,

Plaintiff,

-against-

S. T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the owner of the Mobil Trader, and MOBIL SALES & SUPPLY CORPORATION,

Defendant and Third-Party Plaintiffs,

-against-

TRADE & TRANSPORT, INC.,

Third-Party Defendant.

- -X

SIRS:

NOTICE IS HEREBY GIVEN that the plaintiff hereby appeals to the United States Court of Appeals for the Second Circuit from the order of Honorable Henry F. Werker, United States District Judge, entered May 17, 1976, denying plaintiff's motions for additional and amended findings of fact pursuant to Rule 52(b) of the

PLAINTIFF'S NOTICE OF APPEAL

Federal Rules of Civil Procedure and for reargument pursuant to Rule 9(m) of the General Rules of this Court to the extent that said order: (1) denies the plaintiff's motions; and (2) adheres to the Court's opinion filed February 27, 1976, fixing the relative liabilities of the parties at 75% for the plaintiff and 25% for the defendants.

DATED: New York, New York
June 9, 1976

POLES, TUBLIN, PATESTIDES &
STRATAKIS
Attorneys for Plaintiff
By THEODORE P. DALY
A Member of the Firm
Office & P. O. Address
46 Trinity Place
New York, New York 10006
212-943-0110

TO:

BINGHAM, ENGLAND, JONES & HOUSTON
99 John Street
New York, New York 10038

CLERK OF THE UNITED STATES DISTRICT COURT
Southern District of New York
Foley Square
New York, New York

DEFENDANT AND THIRD-PARTY PLAINTIFF, MOBIL OIL CORPORATION'S NOTICE OF APPEAL.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NAVIEROS OCEANIKOS, S.A., owner of the Liberian Vessel TRADE DARING, Plaintiff, - against - S.T. MOBIL TRADER, her engines, boilers, etc., MOBIL OIL CORPORATION, the owner of the MOBIL TRADER, and MOBIL SALES & SUPPLY CORPORATION, Defendant and Third-Party Plaintiffs, - against - TRADE & TRANSPORT, INC., Third-Party Defendant.	72 Civ. 1225 (HFW) NOTICE OF APPEAL

Original Filed 6/22/76

S I R S :

NOTICE IS HEREBY GIVEN that the defendants and third-party plaintiffs hereby appeal to the United States Court of Appeals for the Second Circuit from the order of this Court entered on February 27, 1976 by the Honorable Henry F. Werker, fixing the relative liability of the parties at 75% for plaintiff and 25% for defendants; dismissing the third-party complaint and denying indemnification and limitation of liability to Mobil Sales & Supply Corporation.

Dated: New York, New York
June 18, 1976

BIGHAM ENGLAR JONES & HOUSTON
Attorneys for Defendant and
Third-Party Plaintiff
Mobil Oil Corporation

By _____
A Member of the Firm
Office & P.O. Address
99 John Street
New York, New York 10038

DEFENDANT AND THIRD-PARTY PLAINTIFF, MOBIL OIL CORPORATION'S NOTICE OF APPEAL

TO:

POLES, TUBLIN, PATESTIDES & STRATAKIS
46 Trinity Place
New York, N.Y. 10005

these so I have some knowledge.

As the trial progresses, I hope your Honor won't be as confused as I am with the blueprints. We will try to make it as clear as possible to the Court. But should the Court have any difficulty in following the testimony, I certainly trust that you will aid us and interject, ask questions so that it is clear to you.

THE COURT: I certainly will.

MR. WAESCHE: Thank you, your Honor.

THE COURT: Do you want to call your first witness?

MR. DALY: American Bureau of Shipping.

Your Honor, may we move to preclude any fact witnesses?

THE COURT: Yes.

Are there any fact witnesses in the court?

MR. DALY: None that I know of, your Honor.

I should say, your Honor, except to the extent our naval architect did board the vessel.

MR. WAESCHE: That's perfectly all right.

J O H N R. B L A C K E B Y, called as a witness by the plaintiff, being first duly sworn, testified as follows:

THE COURT: Mr. Blackeby, the acoustics in this

room are terrible so make sure that Mr. Waesche hears you back at the counsel table.

THE WITNESS: Yes, sir.

DIRECT EXAMINATION

BY MR. DALY:

Q Mr. Blackeby, by whom are you employed?

A The American Bureau of Shipping.

Q And in what capacity are you employed by the American Bureau of Shipping?

A I'm the corporate secretary.

Q How long have you been employed by the American Bureau of Shipping?

A About 36 years.

Q And you are here pursuant to a subpoena duces tecum, that is, a subpoena requesting the production of documents served on the American Bureau of Shipping, is that correct?

A Yes, I am.

Q Have you brought those records with you, sir?

A Yes, I have.

Q Would you briefly describe what records you have?

A These are folders for a vessel now known as the West Wind which had various prior names, including Trade Daring. We have the cargo ship's safety equipment folder,

* * *

MR. WAESCHE: Your Honor, it would seem to me the document speaks for itself.

THE COURT: Yes, I would think so.

MR. DALY: Yes, your Honor, I realize it would speak for itself but this would be by way of a redirect to a question Mr. Waesche asked concerning the last inspection of engine room spaces and so forth.

THE COURT: I don't know whether it is responsive to that area of questioning.

What does it say?

A Pages 6 and 7, "Items 122 through 152, anchor davits and launching arrangements, fire detection and extension equipment, fire hoses."

Q Mr. Blackeby, as of March 18, 1971, was the Trade Daring fully in class with the American Bureau of Shipping?

A According to the records that I brought here, she was.

Q According to the records you have with you, were there any outstanding items, that is, items requiring correction or change as of that date?

A The records would have to be consulted in order to determine whether or not there were any outstanding recommendations.

Q Do you have a table or sheet in there indicating

* * *

now. You go and look at the file.

You have seen the file already, haven't you, Mr. Waesche?

MR. WAESCHE: Your Honor, I have seen portions of the file. I don't know if I have seen everything he has brought up. That's my difficulty.

THE COURT: That's a double difficulty because at this point I think you should have seen all of the files with respect to this vessel.

We will take a recess.

(Recess)

MR. DALY: Your Honor, we have presented Mr. Blackeby with a list and he will undertake to have the list reproduced and we will have that available either later today or tomorrow, and counsel agree we can mark that as Exhibit 42.

THE COURT: All right. Fine.

MR. DALY: I would like to call Mr. Thacher White.

T H A C H E R W. W H I T E, called as a witness by the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. DALY:

Q Mr. White, by whom are you employed?

A Mobil Oil Corporation.

Q How long have you been employed by Mobil Oil Corporation?

A Five and a half years.

Q In what capacity are you employed by Mobil Oil?

A Marine counsel, Mr. Daly.

Q Have you been marine counsel for Mobil Oil all during that five and a half year period?

A Yes.

Q You were so employed then as a marine counsel on March 18, 1971, is that correct?

A That is correct.

Q In the course of your duties as marine counsel, did you investigate the circumstances surrounding the fire aboard the Trade Daring on March 18, 1971?

A Yes, I did.

Q Did you ever attend aboard the Trade Daring?

A Yes, I did.

Excuse me, the Trade Daring?

Q Yes.

A No. Never.

Q You did not.

Did you attend aboard the bunkering barge Mobil Trader?

A Yes, I did.

Q When did you board the Mobil Trader?

A On March 18, 1971.

Q Do you recall what time you went on board?

A I don't recall of my own recollection, Mr. Daly. I prepared a memorandum which I understand is already, I believe I'm correct, an exhibit in this proceeding in which I did note the time and date.

I brought my file copy with me if I may refer to that, to answer the question.

Q Yes, if you would, please.

A According to my memorandum I boarded the Mobil Trader at 1115 hours on March 18, 1971.

Q What time did you leave the Mobil Trader?

A I don't recall, Mr. Daly, and it doesn't appear that I noted it in my memorandum.

Q Approximately how long were you aboard the Mobil Trader?

A I would have to make an estimate after this long period of time, Mr. Daly. I would estimate I was there about two hours.

Q Whom did you interview while you were on the Mobil Trader?

A I spoke to the master, Captain Banks, and to two

crew members, Mr. Milano and Mr. George Beekman.

Q Did you make notes of your interviews or conversations with these crew members?

A I don't recall whether I did, Mr. Daly, specifically, in this instance, but I invariably do make handwritten notes when I speak to people, so I very likely did on this occasion.

Q The report you prepared is a very detailed report, is it not? It goes into the maritime background of the people you interviewed, Captain Banks and Mr. Milano?

A Correct.

Q So I would assume you must have taken notes. Would that be a correct assumption?

A I'm sure I did, Mr. Daly. I'm sure my memory isn't that good.

Q But you don't have those notes with you?

A No, I do not.

Q Were you served with a subpoena requesting that you produce those notes?

A I was served with a subpoena requesting that I bring with me all notes, memoranda, reports, concerning my investigation of the fire, and I have brought all such documents which I have in my file.

Q May I see those, please?

You have produced two papers, each dated March 22, 1971.

They appear to be similar or copies -- are they copies?

A I believe one is an original and the other appears to be a Xerox of the original.

Q If you did have any notes, as I think we both assume you did, notes of your interviews, you don't know where those are at present, is that correct?

A They are not in my file, Mr. Daly, so I can only presume that I threw them away and I can say again that it is invariably my habit when I reduce my handwritten notes to dictated, typewritten memorandum, that I do destroy them so I have no doubt that's what I did in this case.

Q While you were interviewing Captain Banks, was Mr. Milano present?

A As I mentioned, I did speak to him on that date. I do not recall whether he was present when I was speaking to Captain Banks. I just don't remember.

Q When you interviewed Pumpman Milano, was his superior, Captain Banks, present?

A Again I don't recall.

Q I believe you also interviewed a Mr. Beekman, a deckhand, is that correct?

A That's correct.

Q Did you interview Mr. Beekman in the presence of either Captain Banks or Mr. Bilano?

A I don't remember, Mr. Daly.

Q That report which you just exhibited to me, is the same report which was marked Exhibit H in the defendant's answers to interrogatories, is that correct?

A I believe that's correct, Mr. Daly, but if I could examine the copy you have there, I can be more definite about it.

Q You may disregard some of the markings or notations which appear on the copy of the answers to interrogatories which were served upon us.

Does that appear to be the same as the copy you have just produced in response to the subpoena?

A Yes, it does, Mr. Daly.

MR. DALY: Your Honor, the answers to the interrogatories furnished by the defendants were deemed marked as Exhibit 43. They should be on file with the Court.

Q Mr. White, did you play any part in furnishing answers to these interrogatories, Exhibit 43?

A Mr. Daly, as I recall, I received some correspondence or telephone requests from attorneys for the defendants in connection with the interrogatories, and I responded to

them.

Q Did you receive a copy of the interrogatories themselves with the suggestion that you provide the answers as far as possible, as house counsel?

A I received a copy of the interrogatories, Mr.Daly, and also a request to furnish particular information, which I believe was covered by the interrogatories, yes.

Q May I assume then that you read the interrogatories?

A Yes.

Q Interrogatory No. 3 states,and I quote - 3A:

"3A: State whether defendants or anyone on their behalf conducted an investigation or investigations with respect to the casualty described in the complaint."

"3B: If the answer to the above is in the affirmative, state with respect to each investigation conducted, the name, present address, employer, employment position and title of the person or persons conducting such investigations."

Do you recall reading that interrogatory?

A I don't recall specifically reading that but I'm sure if I received a copy of the interrogatories, and that was one of them, I'm sure I did.

Q Mr. White, did you request a Captain P. Neal to

conduct an investigation into the circumstances surrounding the fire on the Trade Daring?

A Mr. Daly, I can't recall whether I requested it. As counsel to Mobil Oil Corporation I give advice on marine legal matters and I may have participated in discussion with my clients as to ways to cooperate with our outside counsel in connection with the defense of this suit.

That's the best I can say in response to your question.

Q Mr.White, I show you this memorandum consisting of three pages, purportedly addressed to T. W. White, Office of Marine Counsel, captioned "Trade Daring Inspection" and apparently signed P. Neal, and ask you if you have seen this before.

A I have, Mr. Daly.

Q That report is not apparently dated.

Can you tell us when you saw that for the first time?

A I believe I saw this for the first time about a month or so ago, in the course of a meeting with our outside counsel, at which time I believe I received it from Captain Neal.

Q And you had not seen it prior to that time?

A I'm just trying to recall,Mr. Daly. I believe I

had seen some handwritten notes that Captain Neal had prepared and had asked that they be typed up. When I first saw those, I don't recall.

Q Was it shortly after the fire?

A Again, I don't recall. That, I believe, are notes of investigation that Captain Neal made and I don't recall when he made that investigation.

Q I show you the first paragraph and it states:

"On April 27, 1971, as requested, I visited the ore/oil vessel Trade Daring at Bethlehem, Hoboken shipyard in company with Hank Halboth, an independent surveyor."

Does that refresh your recollection as to when his survey was conducted and when you saw the notes you indicate?

A I don't recall specifically of my own recollection when Captain Neal went on board the Trade Daring or when I saw notes he may have made concerning his visit.

I'm sure that if it is in that document, signed by Captain Neal, the date is likely to be correct.

I would imagine, Mr. Daly, that I saw that he would have reported to me, including showing me notes thereafter, but I do not recall specifically.

Q Didn't he report back to you shortly after his survey of the vessel on April 27, 1971?

A I don't remember but I think it is likely that he did.

MR. DALY: I would like to have the document consisting of three pages, addressed to T. W. White, signed by P. Neal, marked as Plaintiff's Trial Exhibit 57, your Honor.

MR. WAESCHE: No objection, your Honor.

THE COURT: All right.

MR. DALY: We have been marking our own exhibits, your Honor. And the exhibits are in subject to relevancy, materiality and the weight to be given to them, so I will mark this 57.

xx (Plaintiff's Exhibit 57 received in evidence)

Q Did not the interrogatories I refer to, and which you indicated you hadread, did not they also require the production of the names of persons in the employ or acting in behalf of the defendants who made oral reports?

A Could you read the interrogatory to me again, Mr. Daly?

Q "3A: State whether defendants or anyone on their behalf conducted an investigation or investigations with respect to the casualty described in the complaint.

"3B: If the answer to the above is in the affirmative, state with respect to each investigation so

conducted the name, present address, employer, employment position and title of the person or persons conducting such investigations."

The following sub parts of the interrogatory are devoted to written reports up to subparagraph 5, whether the results or any matters concerning the investigation were reported to defendants or anyone on their behalf orally, "and if so, as to each such oral report (a) the name, present address, employer, employment positionor title of each person making the oral report."

Did my reading of that refresh your recollection, disclosure of oral reports was also requested?

A Yes, that is correct. That is what the interrogatory says.

Q Do you know why the answers to the interrogatories did not disclose Captain Neal's written or oral report?

A I don't know, Mr. Daly. It may be that it dealt with anotherportion of the interrogatories, but I don't know.

MR. WAESCHE: Mr. Daly, will you please at this time state for the record we did produce for you Captain Neal's report quite some time ago.

MR. DALY: I received Captain Neal's report the day after the records were filed, the exhibits were filed in

this case, that is, approximately two weeks ago, I believe, on the 16th, when the digest of testimony of proposed expert witnesses on behalf of the defendant indicated that one of the witnesses, Captain Neal, the fire expert, had been on board the Trade Daring, and I inquired of counsel at that time whether Captain Neal had prepared a written report, and I received the written report at that time.

Is that substantially correct?

MR. WAESCHE: I believe so.

Q The report that is annexed to the ansewrs to the interrogatories, that is, your report which has been identified as Exhibit 57, has the notation on top of it, in the upper left-hand corner of the first page: "Draft."

A That is correct.

Q Was that report ever reduced to final form?

A No, it was not, Mr. Daly.

Q Did you ever submit any supplemental or further report based upon your interview of the personnel of the Mobil Trader?

A No, I did not, Mr. Daly.

Excuse me, nothing more written. I'm sure I gave oral reports based on the information I had set forth in this memo.

Q Did you take any signed statements from any of

of personnel of the Mobil Trader?

A I did not.

Q Mr. White, when did you first learn of the fire on the Trade Daring?

A I don't recall, Mr. Daly, specifically.

I believe I was told about it when I arrived at my office at 9:00 a.m. on March 18, or shortly thereafter.

Q And you went out to the Mobil Trader and took the statements actually on the day of the fire, in fact, later that morning, at about 11:00 o'clock or so, is that correct?

A About that time I went to the Trader and interviewed the crew, yes, sir.

I didn't take statements, as I mentioned.

Q I assume that you took these statements to the best of your ability and believe what you put in there as accurate, is that correct?

MR. WAESCHE: I object to the form of the question. The witness said he didn't take any statements.

THE COURT: You reported your conversation with the captain and the crew of the Mobil Trader correctly and accurately?

THE WITNESS: I did, your Honor.

Q At the time you took those statements --

THE COURT: Yo use the word "statements" and it has a different connotation.

Let's use another term.

Q At the time you interviewed the witnesses on the Mobil Trader, on March 18, you knew at that time that there had been a serious fire on the Trade Daring, is that correct?

A Yes, that is correct.

Q At the time you boarded the Mobil Trader on March 18, did you have any advance information or reports concerning the circumstances surrounding the fire?

A I just don't remember, Mr. Daly. I don't remember at all.

MR. DALY: Thank you very much, Mr. White.

I have no further questions.

CROSS-EXAMINATION

BY MR. WAESCHE:

Q Mr. White, do you have a copy of Exhibit 57 before you?

A I don't know which that is, Mr. Waesche.

(Pause)

MR. WAESCHE: Your Honor, I find I have no questions.

(Witness excused)

* * *

we have it all.

I must warn you, I am not going to read the whole deposition. If you want some part in or the defendant wants some part of it in, let's put it in.

MR. WAESCHE: Your Honor, may I read those parts that I want in now?

THE COURT: No. In the normal course you will have an opportunity.

MR. DALY: Your Honor, my usual practice, I would have the deposition marked and then refer your Honor, upon briefing, to specific portions of the exhibit. Certainly I wouldn't expect your Honor to go cull through this, much of which is irrelevant.

The plaintiff now calls Mr. Doros A. Argyriadis.

D O R O S A. A R G Y R I A D I S, called as a witness by the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. DALY:

Q Mr. Argyriadis, where do you reside?

A Three Stonehenge Road, Morristown, New Jersey.

Q And by whom are you employed?

A By Dormande International Corporation.

Q Where is that firm located?

A The New York office is at 19 Rector Street, in New York.

Q Mr. Argyriadis, I show you Exhibit 52 and 52A, and ask you if Exhibit 52, beginning on page 2, was based on information furnished by you as to your qualifications, and prepared and approved by you with respect to the balance of the material appearing in that portion of Exhibit 52.

A Yes, it appears so, Mr. Daly.

Q I show you Exhibit 52A, and ask you if you can identify that.

A That is a drawing we prepared at my office regarding the Trade Daring's different types of systems, corresponding to fuel, venting and so on.

Q And they were prepared by you, that is, the portion of Exhibit 52, and all of 52A, were prepared by you at your office in connection with this litigation, is that so?

A Yes, sir.

MR. DALY: I have no further questions.

CROSS-EXAMINATION

BY MR. WAESCHE:

Q Mr. Argyriadis, I am going to draw on this piece of paper a rectangle, and I am going to put in the middle

of the rectangle an X.

Does that type of a symbol have any specified meaning when it is used in blueprints?

A Yes, it is. Many meanings.

Q Is one meaning that the container is a closed container?

A One of the meanings, yes.

Q If it is a container or tank, it would mean it is a closed container or tank?

A Yes, sir.

Q And if there were another tank immediately adjacent to it, and I'll draw another box, another X, if such a diagram appeared on a blueprint, would it mean that there were no connections between the two tanks, assuming they were tanks?

A Not necessarily.

Q What would it mean?

A It would mean there are two different entities surrounded but it doesn't necessarily mean there is no connection.

Q If there were connections, would they be shown on the blueprint?

A If it is a detailed blueprint, yes. If it is not a detailed blueprint, no.

Q But if it is a detailed blueprint, any openings would be?

A Openings in what respect, sir?

Q If you have two boxes-- let's say they represent two tanks-- drawn as I have on this sheet of paper, would a detailed blueprint indicate any openings between the two tanks?

A A structural blueprint will, yes.

May I, your Honor, explain something?

THE COURT: Yes.

Q Go right ahead.

A When you draw it tht way it means it is a layout drawing of some sort. Not necessarily a structural blueprint or piping bluepring which would show the details.

Q I am talking now about a piping blueprint, which had such an imprint on it as I have indicated on this piece of paper.

A That would indicate the outline of two tanks.

Q Two tanks which were perhaps contiguous but nevertheless two enclosed spaces without any openings between them?

A It is hard to say, sir. I can't answer unless I look at the drawing. There may be limber holds between them.

Q Wouldn't they show on a detailed blueprint?

A On a structural, I'm trying to say that, not a piping one.

Q Did you examine any blueprint of the Trade Daring?

A Yes.

Q Do you have it with you?

A I have one with me, the layout of the engine room. This is a very big one. And I think there are others.

Q Did you specifically refer to a piping diagram?

A Piping drawing?

Q Yes.

A I don't have one with me, sir.

Q I didn't ask you, sir.

I asked you if you referred to one when you made your diagram, which is 52A.

A Yes.

Q What other information did you use in preparing your diagram? 52A.

A The drawing you have in your hands, the piping diagram you referred to, which is fuel oil system diagram, the venting diagram, rather, venting drawing, I beg your pardon, the capacity plan of the vessel which is also general layout--

Q My question is limited to what you used when you prepared 52A.

A I'm limiting myself to that, sir. I believe those are the four plans that I did.

Q Did you use anything else when you prepared 52A?

A I don't think so, sir.

Q When you prepared 52A, did you assume, particularly assume that the piping and venting diagram that you were given and referred to, was the system which was in effect on March 18, 1971, when the vessel caught fire?

A It was.

Q Would you answer my question, please?

Is that what you assumed?

A Correct.

MR. WAESCHE: I would like the diagram I drew marked as Defendant's Exhibit 104, your Honor.

xx (Defendant's Exhibit 104 received in evidence)

MR. WAESCHE: Your Honor, we may have trouble with this.

THE COURT: You might get a blackboard and get big --

MR. WAESCHE: I actually want the witness himself to mark on it.

THE COURT: If we put the chart on the blackboard,

he can do that.

Q Mr. Argyriadis, when the Trade Daring was first built, did the vessel have or carry three types of fuel?

A That's what is indicated on the drawing, sir.

Q There was a heavy or black oil for the ship's boilers?

A Yes, sir.

Q And a regular diesel oil which ran her main propulsion engine, is that correct?

A That's correct, sir.

Q And then there was a light oil system which ran the diesl motors that activated the ship's generators, is that right?

A That's correct, sir.

Q On the various plans and whatnot, which, by the way, are in German, they have these three systems designated, is that not so?

A That's correct.

Q And there are overflow tanks for each system, is that correct?

A Correct, sir.

Q There is an overflow tank for the black oil,an overflow tank for the diesel and an overflow tank for the light oil?

A That's correct, sir.

Q And these overflow tanks are located in the bottom of the engine?

A Right.

Q Also referred to as double bottom tanks?

A Yes, sir.

Q I wonder if you would take this marking pen, and go up to that diagram which is Exhibit 54, and show us the piping system of the engine room.

A Which one, sir?

Q And show me the double bottom overflow tank for the diesel fuel.

A This one (indicating)

Q Would you trace it in red?

(Witness complies)

Q I wonder if you would label that "diesel oil."

(Witness complies

Q Does that go on the cross-marking which I showed you?

A Absolutely, but may I say something?

Q Just do it.

A Yes.

Q I would like you, if you would, take a green pencil and show me the double bottom overflow tank for the

light oil system.

(Witness complies)

Q Would you also label that, if you would, "light oil overflow tank."

(Witness complies)

Q Does that tank also have the X mark which I showed you on 104?

A Yes, sir.

Q Would you consider that blueprint, Exhibit 54, to be a detailed blueprint?

A Yes, sir.

Q Does this diagram, Exhibit 54, show any openings between the double bottom overflow tank with the diesel oil or bottom overflow tank for the light oil?

A No, it does not.

Q Would you mark in yellow the side tanks which hold the diesel oil?

A It doesn't show in yellow.

Q I will give you another one. I guess this is a peach color.

(Witness complies)

A This is going to be confusing because the side tanks are not square and the lines are not indicative of the size.

Q I just want the location.

A This is approximate, but it goes on the back like this (indicating)

MR. DALY: Your Honor, I think because of the witness' position, he might speak a little louder and turn to the reporter when he is explaining.

Q Would you put on there "diesel site"?

(Witness complies)

Q Mr. Argyriadis, when the vessel is taking on diesel fuel, is it correct the diesel fuel first flows to the side tanks?

A That depends entirely on the valves that are open.

Q Are the side tanks the largest tanks?

A Yes.

Q In capacity?

A In capacity.

Q Then in the normal function of the ship, diesel oil is drained from a side tank to something called a settling tank, is that correct?

A This is in the normal function of operations, yes, absolutely.

Q The settling tanks are smaller than the side tanks?

A Absolutely.

Q And then from the settling tanks, it goes through

a filter system into a day tank?

A Through a separator to a day tank.

Q So that the normal operations, it goes from a side tank, actually a holding tank, into a settling tank.

What is the function of that?

A To let it settle into the bottom so it doesn't go into the engine.

Q There are certain valves which must be opened to allow access from the side tank to the settling tank?

A Yes, sir.

Q Those would be internal valves, is that correct, in the engine?

A Those would be in the engine, yes.

Q Then from the settling tank it goes through a filter to a day tank?

A Through a pump.

Q In order to get from the settling tank to the day tank, does a pump have to be activated?

A Yes, sir.

Q Where does it go from the day tank?

A To the engine.

Q By that --

A Through a booster pumper, another filter and then the engine.

Q So in order that one could get the oil from the settling tank to the day tank, it is necessary for the engineers to open certain valves, operate a pump, and pump it from one to the other, correct?

A Yes.

Q Is there an overflow line from the sid tanks to the diesel oil overflow tank?

A Absolutely.

Q I wonder if you would please show the Court in purple, the overflow line which leads from the side tank to the double bottom diesel oil overflow tank?

(Witness complies)

Q That doesn't show up very well, does it?

A If I press, it will show up.

Q No. 632 is the line you are drawing on?

A Yes, sir. This overflow is not going to appear on that tank outlined before, because the tank in itself is extending in the back in a different dimension.

Q But the overflow line is indicated on the diagram, Exhibit 54, is it not?

A The overflow line is indicated in the diagram, Exhibit 54, and is infact the line I'm marking.

Q And you are marking that in purple?

A Yes, I'm trying.

Q And it is also line 632.

What other tanks, if they overflow, according to this diagram, go into the diesel overflow tank?

A The settling tanks.

Q Any others?

A Overflows?

Q Overflows.

A It doesn't appear.

Q Just the settling tanks?

A Right.

Q The diagram correctly depicts the piping system as it was on the Trade Daring on March 18, and according to the diagram, the only tanks which overflow into the double bottom diesel overflow tank are thesettling tanks and the day tanks, is that correct?

A The diagram depicts the time the vessel was built, sir. You said March 18th?

Q I did.

A I have to say no to that.

Q But didn't you testify that you used this diagram--

A Absolutely.

Q -- to prepare your exhibit?

A Yes, sir.

Q And are you now testifying you do not know whether this diagram correctly depicts the condition of the vessel as of March 18, 1971?

A I am now testifying that it does not.

Q It does not?

A No, sir.

Q You mean the diagram that you made is wrong?

A No, sir. It depicts exactly what existed on the vessel on March 18, 1971.

This is construction drawings, sir.

Q Are you telling me that the system which existed as of March 18, 1971 is not as depicted on this diagram, Exhibit 54?

A The system is 99% the same. The difference is that there is no more gas oil used on the vessel. There was no gas oil used on the vessel. It was all diesel oil.

I am referring to what you asked me before, sir.

Q That is correct.

A So the diesel oil and the gas oil tanks were interconnected on the overflow.

Q The diesel oil and--

A And the gas oil overflow -- the gas oil is the light oil tanks-- were interconnected here and there was one overflow tank.

Q Interconnected where?

A Between the two tanks.

Q How do you know that?

A I know that.

Q How do you know?

A I know it from knowing the vessel, sir.

Q Did you actually open those tanks and go down and look?

A From the time the owners bought the vessel I inspected the vessel at purchase.

I have asked the people on board. They were not using gas oil anymore. They were using only diesel oil and because they were using only diesel oil, these tanks were interconnected, and there was no more gas oil being taken on board the vessel and this tank--

Q Meaning what tank?

A This is what is called a gas-oil side tank which is another holding tank, I believe you call them.

Q What happened to that one?

A That tank was used for regular diesel oil.

Q Then after the vessel was purchased, the piping system was then modified, is that right?

A No, sir, it was before it was purchased it was modified.

Q Since its construction, and about the time of her purchase, the piping system was modified?

A Not the piping, sir. The tankage was. There was a manhole in between the two tanks and it was taken apart and there was an interconnection between the two tanks.

Q Was the American Bureau of Shipping notified as to that modification?

A I have no idea. That's the way we found it, sir.

Q Was Germanischer Lloyd notified?

A I have no idea. It was previous owners.

Q As the vessel was constructed in accordance with these plans, is it not so, that any overflow from the side tanks or settling tanks which pressed up into the center diesel oil overflow tank would be forced through the vent lines onto the deck in accordance with that plan?

A Would be forced--

Q Where is the vent line?

A This one here (indicating)?

Q We will use green.

A There is another one here (indicating)

Q Will you mark it in green?

(Witness complies)

Q That is line 670, isn't it?

A Yes, sir.

Q And that line vents to the deck, does it not?

A Yes, sir.

Q So that under initial construction, before modifications, any overflow from the side tanks or the settling tanks, the discharge into the vessel's overflow double bottom,which is marked in red, and if it was then pressed up, would be forced through the vent line onto the deck?

A It would also go to other places, sir. That is not the only pipe leading out of the tank.

Q Where else would it go?

A You are leading out to a pump-- several places. Here you have a line that goes through a valve that could travel throughout the vessel.

Q And that goes through a pump?

A This does not go through the pump. It was after the valve chest to the pump (indicating) If that valve chest was open it would go any place.

Q If the valve chest was open, it would go?

A It could, yes.

Q But there is at least in the system, as the vessel was built, valves in the lines which would prevent any overflow to escape, except onto the deck, is that not so?

A Would you repeat that, sir?

(Question read)

A Without looking completely through, it appears so, yes.

Q And that's a safe system, isn't it?

A It is a good system.

Q That type of a system conforms with normal safe practice for marine engineering, doesn't it?

A It does, yes.

Q But if one had a system which would permit an overflow to discharge directly into the engine spaces in an area above a generator, such a system would not conform to safe engineering practices, would it?

A Safe engineering practices-- you mean ABS or general, sir?

Q Just general, just common sense.

A Would the overflow from the overflow tank? Well, we could have, sir, six overflow tanks, one right after the other and then, of course, it would make it even more safe.

Q That doesn't answer my question.

A I know it doesn't but you are asking me to answer a question I can't really answer because the overflow tank is there to take care of an overflow.

Q That is correct.

A Now, to have a redundant overflow to an overflow is, I think, a bit more safe, more than safe engineering practices asks.

Q I will rephrase it.

If a vessel has a system which would permit an overflow to take place directly in the engine room at a spot above a generator or an operating piece of machinery, would you say that such a system conforms with safe, generally recognized marine engineering principles?

A Without an overflow tank or with?

Q With an overflow tank.

A I wouldn't consider that that unusual, sir.

Q Would you consider that to be a safely designed system?

A Yes, sir.

Q I would like to read from Exhibit 52, page 10.

THE COURT: Do you want him at the diagram?

MR. WAESCHE: I will probably be coming back to it, your Honor.

THE COURT: All right.

"Q It is apparent that the fire which occurred on the Trade Daring was a direct result of and was proximately caused by an excessive quantity of bunkers being pumped on board the vessel by the bunkering facility Mobil Trader,

thereby causing the overflow of bunkers into the overflow double bottom tanks which then rose through the leakage tank and the save oil piping to the basin of turbo filters and the gas oil day tank, finally falling onto the No. 3 generator and igniting the bunkers which resulted in the fire on board the Trade Daring.

My question to you is, how did the oil get from the double bottoms through the save-oil system and back into the engine?

Would you please show me on this diagram, Exhibit 54, if you will, how that could have occurred?

A Right through here, sir (indicating); through this line, through this valve chest right here.

Q Now I do want a different colored pencil. See how the brown would work.

(Witness complies)

A And to the generators (indicating).

Q So that there is a line which leads from the light oil double bottom overflow tank out up to a valve chest, three-way valve chest, which is line 637 going into the three-way valve chest, and which is 638, in brown, coming up and going back to another tank and then up to a location under a filter and a location under the light oil day tanks; is that right?

A Correct.

Q I am going to indicate something to you on this diagram.

I am going to circle in red and draw a line from it. What is that?

A A hand pump.

Q What is the purpose of that hand pump?

A It can draw from the overflow tanks.

Q The overflow tanks or the overflow light oil tanks?

A The overflow tanks and it can draw from the third tank as well, from all three tanks.

Q So the purpose of that pump that I have circled in red, is to discharge any overflow which got into the overflow double bottom tanks, is that correct?

A Discharged?

Q To take out.

A It draws. There is a suction line from there to put it into the boiler room.

Q So the purpose of the pump--

A May I finish, sir, so I can explain?

Q Yes.

A Then there is also a variation to that. It can also push it outboard.

Q Overboard?

A Over the side of the vessel, right.

Q So the purpose of the pump is to get rid of any oil which might have fallen into the double bottom overflow tanks?

A No, sir. That's mostly for cleaning, I would say, or taking the sludge out of it.

Q How does one get rid of the oil that has accumulated here?

A You have your transfer pumps, through a valve chest, and you can draw from any tank you wish.

Q Insofar as this line you have drawn in brown, the 637 line, that comes from your light oil overflow tank up to a three-valve chest, and there is one line which goes off from the valve chest to the pump, is that correct?

A Correct.

Q And the flow is designated by an arrow?

A The suction flow, yes.

Q The flow indicates it doesn't go into the tank but rather comes out of the tank, isn't that so?

A Well, that depends on what you are doing with the line, sir.

Q I will just put a circle around this.

Q If this system was in operation on March 18, 1971, then any oil that overflowed into the double bottom tanks would come up through line 637, which you have in brown; then it would to a three-way valve?

A It is a valve chest, not a three-way valve.

Q A valve chest which consists of three valves.

A As a matter of fact, as I recall, the three valves were separated.

Q If those valves were closed, oil couldn't go any further, could it?

A No.

Q It would stop there?

A Yes.

Q You did say that it overflowed the engine room?

A Right.

Q That would mean either that the valves were open or that the sytem was so modified that no valves were actually in existence, isn't that so?

A That's normal practice to have these valves open.

Q Would you answer my question?

A Yes, of course. It would stop here. We said that before.

Q So, therefore, if this system was in existence on March 18, 1971, in order for oil to back up into the engine

room either the valves would have to be open or the plan would have had to have been modified again so as to remove those valves, is that not so?

A Yes, that is so, but I don't know the plan was modified. As a matter of fact, I know it was not. The modification? It is simple. The valves are open because of the drain tank (indicating)

Q Furthermore, if this system was in existence at the time of the casualty, it would have to go through this valve chest which we have just talked about, come back up, go through a leakage tank?

A Right.

Q I will circle that in red.

It would have to go back up through a leakage tank. Then if it went through the filter system it would have to go through two other valves, is that right?

A Yes.

Q And those valves would have to be open before you could get the--

A They would be normally. Otherwise any drippings out of the filter or the day tank would not go into your leakage tank.

In other words, it would-- may I continue or are you going --

Q I don't want to interrupt you. If it seems that I do it is merely because I think you haven't fully answered.

So go right ahead.

A The valves over here would be primarily for closing them when you want to wash out the basin. Normally they would be open. Any drippings out of the filters which would be oil, would go through the leakage tank.

Q So then with this system, as you have described it, you said it is normal to keep the valves at the bottom of the drain open?

A Yes, sir.

Q And normal to keep the valves in the three-way chest open. If that's a normal system, then if you did have an overflow, and pressure built up, you could then, right through that line, back up into the engine room?

A Of course. There is no system that's absolutely fail safe, sir.

Q No system that's absolutely fail safe, but isn't a normal system so designed that you could not get an overflow into the engine room but rather, as this system was initially designed, you would get it out onto the deck?

A That's not the reason for the vent, sir.

Q I didn't say that was the reason for the vent.

A In other words, what you mean to say is that I'd rather pollute the sea than pollute the vessel? I'm not going to say that.

Q I want to say you would rather pollute the sea than have a horrendous fire.

A The horrendous fire is fortuituous circumstances of the time. It has nothing to do with the--

Q What does fortuituous--

A Unfortunate.

Q I agree with that.

A It is a system that is totally safe, that is being even today designed in vessels the same way; that has not changed in any diesel vessel that I know of, and the vents are never to permit over the side. God forbid that.

Q What makes you so sure that that leakage tank which I have circled in red was actually on board when the fire occurred on March 18, 1971?

A First of all, I know it was there, physically I know.

Q How do you know?

A Because I saw it. I inspected the ship after the fire.

Q When did you last see it?

A As to the day exactly, some time the end of March, beginning of April-- no, towards the beginning of April, rather.

Q After the fire?

A Definitely.

Q You went down and traced the lines and saw that tank?

A No,I didn't trace the lines, sir.

Secondly, thereason I know that is there, there's leakages out of the main engine and out of the generators. They have to go some place. There has to be a leakage tank and there has to be an overflow.

Q But the leakages could all go down into the double

A On the overflow tanks.

Q Not only on the overflow tanks but the save oil system, if you will, line 60.

A But this is where my save-oil system goes, into the leakage tank. If I didn't have that, where would it go, sir?

Q I sugest to you that it went directly into the double bottom overflows.

A No, sir.

Q You deny that?

A Absolutely not.

Q Supposing you did have a system where your leakage and your drips went directly into your overflow tanks, would that be safe?

A Yes, sir.

Q It would?

A Yes.

Q After the fire, you went aboard the ship, is that correct?

A Yes, sir.

Q Say within a week or so?

A I was there many times.

Q At any time that you went aboard the ship, did you trace, actually trace, from top to bottom, any of the lines we have marked on this diagram, Exhibit 54?

A Yes, sir.

Q Which ones?

A All the overflow lines.

Q Which overflow lines?

A The ones particularly on the port side, this side (indicating), out of the side tanks, settling tanks.

Q Line 632?

A That would be the side lines. The settling tanks we have not marked.

Q You actually traced the 632 lines, from the side

tanks?

A Absolutely.

Q What else?

A I checked that the collecting line, so to speak, was to --

Q Of the save-oil?

A There was one collecting line or major collecting line on the one side and one on the other side and they interconnect some place and I don't recall why they interconnect.

Q Did you trace that?

A I traced it to the point where it was obvious that it was intact. I didn't trace it to the tank because at the time I was tracing the lines there was an awful lot of sludge on board.

Q As a matter of fact, this leak tank or collecting tank, according to the plans of the vessel, when it was built, constructed, is below the floor plates, isn't it?

A No, it is not, sir.

Q Are you sure of that?

A Absolutely. May I show you?

MR. DALY: Your Honor, I would ask the witness be given an opportunity to answer the last question as to whether or not the tank --

THE COURT: He will be given an opportunity.

It might be a good idea if we suspend now until two o'clock.

(Luncheon recess: 12:30 p.m.)

AFTERNOON SESSION

2:00 p.m.

D O R O S A. A R G Y R I A D I S, resumed:

CROSS-EXAMINATION (continued)

BY MR. WAESCHE:

MR. WAESCHE: Your Honor, may I have the few questions and answers read back?

(Record read)

BY MR. WAESCHE:

Q At any time during your investigation, survey of the vessel, following the fire, did you go below the floor plate level at the bottom of the engine?

A You mean within the doubling bottom, sir?

Q No, I meant the floor plate.

A There isn't a continuation floor plate at the lower level. It is an operating platform and has openings where you can go down to the double boiler.

Q That doesn't answer my question.

At any time did you go below the floor plate at the lower reaches of the engine room spaces during your inspection of the Trade following the fire?

A I'm trying to answer the best way I can. The floor plate, the operating level, floor plates-- that's what you mean, I presume?

Q Yes, it is.

A Now, that is not a continuous deck. It is discontinued. There's areas where you can go below, reach the double bottom and areas where you can see to the bilges of the vessel, to the bottom.

Q Now will you answer my question?

A If you rephrase your question, sir, I can answer it. I will be very happy to.

I have certainly gone below the level of the floor plates, if you take the major area of the floor plates as being that level.

Q You did then go --

A You can go below. You can see below very clearly right down to the bilges.

Q My only question to you is: Did you go below that level, that is, the level of the floor plates during your inspection?

THE COURT: He objects to the use of the word "floor plates."

Did you go below the operating level?

THE WITNESS: Yes, sir.

Q Is it your testimony that the leak tank is above the floor plates?

A It is above the tank top, between the tank top

and what you call the floor plates, which is the operating level.

Q Now, the save-oil system, line 60, according to your testimony, would lead into a leak tank, is that correct? That is a leak tank I have encircled in red.

A Right.

Q That leak tank is located between the floor plate and the double--

A Right at No. 1 generator on the right-hand side forward.

Q But it is located between the flore plate and the double bottom tanks?

A Yes, sir.

Q If oil accumulated in the leak tank, it would then cut out of line 638 down to the valve chest, is that correct?

A Yes.

Q Where is the valve chest located?

A The valve chest is located just forward of the leakage tank, almost above-- I can't be entirely sure -- almost above the double bottom tanks.

Q Isn't that valve chest located above the floor

plate?

A Yes.

Q So if your leak tank is beneath the floor plate, and the valve chest is above them, is that correct --

A Sure.

Q -- so, therefore, any oil which accumulated in the leak tank would then have to go upward to the valve chest, is that right?

A I presume is in the leak tank.

Q I'm sorry?

A I don't understand.

Q Anh oil which came from the leak tank to the three-valve chest, would have to flow upwards, wouldn't it?

A That is assuming a pressure on the leak tank.

Q Of course. No other way it can get upwards?

A No.

Q So it couldn't drain from the leak tank to the valves?

A Couldn't drain from the leak tank to the valves?

Q Through just the normal process of gravity.

A Of course not.

Q So, therefore, in order to get oil from the leak tank to the valve chest, you would have to have the leak tank full under pressure, isn't that so?

A Sure.

Q Then it would have to flow up to the valve chest and then come from the valve chest down to the double bottom, is that right?

A Specifically there is no double bottom in the engine room.

Q I mean the double bottom tanks.

A The overflow tanks?

Q Yes. Is that correct?

A Sure.

Q So if the purpose of this system is to allow a drainage from these various tanks, enters into the double bottom space through a leak tank, then at all times the leak tank would have to be filled before that could occur, isn't that so?

A That's the reason for it being at the lower level because that's a safety precaution.

Q First answer my question. Then you can explain it any way you see fit.

A Okay. Can I have the question, please?

(Question read)

A The purpose is not that, sir.

Q I didn't ask you what thepurpose was. Would you please just answer my question?

A Your question is whether the purpose, sir, is -- I'm sorry, that's the way I understood it.

MR. WAESCHE: Would you read the question?

THE COURT: Yes.

(Question read)

A Assuming that the purpose as so stated is the purpose, yes.

Q Please, Mr. Witness, answer the question. Would you please do so?

THE WITNESS: Your Honor, it seems to me that the question is double.

THE COURT: You don't have to assume his purpose and if you don't assume his purpose, then you can say no.

THE WITNESS: If I don't assume his purpose is correct, I say no?

THE COURT: Yes, if that's the true answer.

A Then I'll say no.

Q How else could oil get from the leak tank into the overflow double bottom?

A By having an overflow on the leak tank and having a head pressure on it.

Q That is not my question.

My question is how could any oil get from the leak tank to the overflow double bottom tank unless the

leak tank was completely filled?

A That is the only way you could have oil from the leak tank doing through to the overflow tank, is by having a head pressure on the leak tank.

Q Thank you.

So the answer to my question was yes, wasn't it?

A No, sir, it was no, because that is not the purpose.

Q I didn't ask you about the purpose.

But now, if you wish, what is the purpose of the leak tank?

A The purpose of the leak tank is to take small leakages from the main engine, generators, filters, or whatever leakages accumulate in the leak tank, from there on there is an option for the crew either to allow it to go eventually into the double bottom overflow tanks or to send it to different systems for burning.

Q To send it to different systems through the hand pump, is that correct?

A I believe there is another method, too, sir. That's at least one method, yes, sir.

Q It is the only method that can be used up to this three-way valve, is it not?

A You have a system right here through a pump that

you can draw from the leak tank, right here. You also have a system--

Q Through a pump?

A That you can draw.

Q Where would it go?

A Through this pump you could switch it off to this system which I can't read exactly what it is right now and eventually you could pump this overboard if you wanted to or you could pump it to another tank over here which shows a heating coil and I presume-- I don't know what it is, I better not say.

Now, may I also say other ways?

Q I'm sorry?

A The hand pump is past the valve chest.

Q It is connected to the valve chest, is it not?

A Past the valve chest. So if you had the valves open here, you wouldn't have to operate the hand pump. Having head pressure over here you would allow this to flow directly into your overflow tanks.

Q If the valves were all open?

A Sure.

Q If the system which existed on March 18, 1971, the day of the fire, is as you described, then is it not so, that any overflow in the double bottom tank would immediately

very quickly, be transferred to the same save-oil basins on the upper reaches of the engine room because before you can get oil into your double bottoms, your leak tank has to be already filled, is that not so?

A No, sir.

MR. DALY: I object to the form of the question, the term "any overflow" without any indication where the overflow is coming from or going.

I think the question should be amplified somewhat.

MR. WAESCHE: It doesn't make any difference.

THE COURT: My ruling would be you should amplify it somewhat. You have got a couple of sources, right? Let's try it with each of the sources so that you can nail it down if it is so.

MR. WAESCHE: Yes, thank you, your Honor.

Q You have just testified that before any oil can get from the leak tank to the double bottom overflow tanks, the leak tank itself must be filled, is that correct?

A That is correct.

Q That would also mean that the line which reads from leak tank, as you have testified, through a three-way valve chest, and then down into the double bottom tanks, would also be filled, is that so?

A Yes.

Q So, therefore, under that system, once your double bottom tank was filled and pressed up, you already have the leak tank filled, so that your oil will be transferred quite quickly through this system up to the upper levels of the engine room, wouldn't it?

A You're assuming an overflow. You are assuming a completely filled system?

Q I am.

A That is not what the normal case of the vessel is, sir.

Q I didn't ask you anything about what is normal.

I asked you if the double bottom tanks are pressed up, given the system to which you have testified, that would mean that very quickly you would have an overflow on your upper reaches--

A Absolutely. That's what happened.

Q Fine. Thank you.

Now, sir, I wonder if you would come back to this diagram.

According to the diagram, is it not so that an overflow from the light oil side tank would go into the double bottom overflow tank?

A Yes, sir.

Q I wonder if you could draw for me -- let's try

yellow -- the overflow line from the gas side tank or light oil side tank into the double bottom overflow.

A If you can see that.

Q I'm afraid I can't.

A Maybe we can use a cross-hatch.

Q And that is line 634?

A It looks like it, yes, sir.

Q Then any oil which was discharged or which overflowed from the light oil side tank, would go into the double bottom?

A That was not at the 18th of March a light oil tank anymore. It was a diesel tank.

Q You mean it was used to carry diesl fuel?

A Yes, sir.

Q That would be, then, one of the tanks which the crew members would have used, or would have filled during the course of this operation?

A Yes, sir.

Q That's a much smaller tank than the diesel oil side tank?

A I believe so, yes. I'm quite sure it is.

Q And it is a much smaller tank than the diesel settling tanks?

A No, sir.

Q It isn't?

A No, sir. I believe that's bigger.

Both settlers or each settler? Each settler is definitely smaller. Whether both of them are smaller than this or this is bigger, I don't know.

Q So is it not a factor that any oil which overflowed from the light oil side tank, which was being used to carry diesel oil, would go into the double bottom tanks?

A The overflow tanks, yes, sir.

Q The double bottom overflow tanks?

A Correct, sir.

Q And then if there was a continuous overflow from this light oil side tank, it would, according to you, back up through line 637, through this valve, through the gas oil tanks, and discharge in the engine?

A No question about it.

Q So it is not strictly limited to an overflow from the side tanks which would cause a discharge into the engine?

A Sir, the side tanks, settling tanks, or the so-called gas-oil tank would create the same situation, no matter which tank overflowed.

Q How about the day tanks?

A The day tanks, too, but the day tanks, taking into

consideration the filling, it is impossible to fill it from the deck and you have to go through apump, you would not be able to do that.

Q Therefore, if a crew member of the Trade Daring carelessly left a valve open on the gas-oil tank or left a gas-oil tank on the settling tanks, you get the same filling up of the double bottoms and of overflow, would you not?

A Sure.

Now, the question is -- wait a minute, the settling tanks, were they being filled at the time, sir?

MR. DALY: Your Honor, I was going to make an objection before that Mr. Waesche had asked a question which had assumed something that was not in evidence; namely, the tanks that were being filled -- I believe he mentioned a day tank and light oil side tank.

I don't believe that's any part of the testimony. I believe the main side tanks, bunker tanks, were being filled and previously the large gas-oil tank, but I believe you are asking this witness questions based on nothin he has before him and something that is not in evidence.

MR. WAESCHE: I disagree with you, Mr. Daly. I am asking him what could have occurred and he has answered.

MR. DALY: If you are assuming a hypothetical situation, proceed.

THE COURT: That is where he thinks he is. We have enough problems without getting into hypotheticals.

MR. WAESCHE: This is what your Honor will ultimately have to decide.

THE COURT: At this moment, I don't know.

Q I point to two tanks and ask you what they are.

A Those are the gas-oil day tanks.

Q When you went aboard the Trade Daring following the fire, were the gas-oil day tanks as depicted on Exhibit 54?

A No, one tank.

Q Is that again an indication that this Exhibit 54 was not as the vessel was constructed or after construction there was modification?

A No, sir. This is purely schematic. Physically the tank is one from the outside but there is a partition in the middle.

Q On this diagram it shows two tanks without --

A It shows the filter over here practically as big as the side tanks, too. It is a purely schematic diagram.

Q At least we can say that when you go aboard the vessel and you look at the light oil day tanks, they don't

appear as they do on this diagram?

A No. It appears as if this totally interconnected (indicating).

Q This diagram also shows a basin, and let me mark that basin in green, under the settling tanks, doesn't it?

A Yes, sir.

Q Did that basin exist when you went aboard the Trade Daring?

A Not in total amount as shown here.

Q Did it exist at all?

A Yes.

Q It did?

A Yes.

Q Under both settling tanks?

A There is one here and one there.

Q Under the settling tanks?

A Yes.

Q You are quite sure of that?

A Absolutely.

Q I also notice that beneath the filters, and I will circle them in green, on the 60 line, there were two valves, and supposing I just write "valves" on this.

Did those two valves exist on the Trade Daring when you boarded it?

A Yes, sir.

Q You are sure of that?

A Absolutely.

Q You saw them?

A Yes, sir.

Q No question in your mind?

A No question. I can tell you what they looked like.

Q What did they look like?

A Like the valve you have in your garden hose, a hand valve like that.

Q And you saw them?

A Absolutely, no question.

Q They were under the basin--

A If I may describe it, sir?

Q Just a minute.

The valves you are describing are under the basin which is below the filter system, is that right?

A Yes, sir.

Q And you saw them?

A Yes, sir.

Q No question about it?

A No.

Q And you also traced this 60 line which is a drain

line and as you traced it all the way down, that line went through the leak tank?

A Yes.

Q And from there to the three-valve--

A It looked like that. I didn't go underneath to look at the leak tank because the bottom of the leak tank is at the double bottom level. The line looks like it is coming out of the leak tank, comes up to the valve chest, and goes to the bottom of the ship, and into the double bottom --

Q You didn't trace that?

A No, sir.

Q All you did trace was the line as it came down -

A I satisfied myself that the line was intact, that it went to this tank and there was a line leading from this tank that appeared to be leading from this tank to the overflow double bottom tanks.

Q Through the three-valve chest?

A Yes, sir.

Q How did you satisfy yourself --

A By looking.

Q Please. How did you satisfy yourself that the drain line went to the leak tank?

A That was quite obvious. You can see it. You can

follow it with your eye.

Q Right down through?

A To the drain tank.

Q And right down through the floor plate?

A I tried to say before, this is not the floor plates as you want them to be. It is not a deck. There is openings you can see through, you can go down below and in fact if you want to, and you didn't mind getting real dirtv on that ship, you can go to the bottom of the vessel.

Q Did you do so?

A I traced the line. I think I answered that.

Q Did you trace the line when it went --

A To here. Yes, sir. (Indicating).

Q And you saw--

A I satisfied myself.

Q Did you see it?

A I satisfied myself that there was a line leading out of here to here.

Q Out of where?

A Out of the leak tank to the double bottom overflow tanks. I didn't go down to feel whether it was connected or not.

Q You don't know then whether it went through the three-way valve chest?

A It did. It was sitting here (indicating)

Q Did you actually see the line, that is, the save-oil system lead into the leak tank?

A Yes, I did.

Q You saw it?

A Yes, sir.

MR. WAESCHE: I have no further questions.

Your Honor, this has been marked for trial purposes as 54, but it does not have all these lines on it which now appear.

THE COURT: The lines are on it and it is 54. We don't want to give it another number.

MR. WAESCHE: Could we, however, have it actually marked as 54. It is Plan No. 988C111A.

(Plaintiff's Exhibit 54 received in evidence)

MR.DALY: Your Honor, we have not really distinguished between exhibits except for the purpose of who has custody of them because they are all before the Court.

REDIRECT EXAMINATION

BY MR. DALY:

Q Mr. Argyriadis, prior to the fire of March 18, 1971, approximately how many times had you been on board the Trade Daring?

A At least half a dozen, maybe more.

Q And for what purposes had you been on the Trade Daring prior to the fire?

A I did, first of all, the original inspection of the vessel for purchase in February of 1970.

I attended delivery of the vessel shortly thereafter, in Emden.

I attended drydocking around the same time.

I attended her once in Montreal, very shortly and superficially, if I remember right, and I think that was before the fire, Mr. Daly.

I attended her again in Emden the end of February 1971, and after the fire.

Q I believe you testified that prior to the vessel becoming the Trade Daring, that is, under the previous owner, at some time at least the overflow double bottom tanks consisted of a diesel oil overflow tank, and also a light oil overflow tank, is that correct?

A That's correct, sir.

Q What machinery or engines did the diesel oil serve on the Trade Daring before she was the Trade Daring?

A The main engine, sir.

Q And what machinery or engines did the light oil serve at that time?

A The generators.

Q At some point in time the vessel's engines and generators were adapted to use simply diesel oil, is that correct?

A No, Mr. Daly, that is not correct. It is not adaption. You can use in a diesel generator diesel oil or gas-oil. Gas-oil is not readily available throughout the world. It is mostly available in Europe, and the vessel was built originally for German owners. Naturally the generators would run with less overhauling, if she was run on gas-oil, so they apparently did that, you know, to save on maintenance on the generators, but eventually I presume that they decided that the systems were too complicated and they incorporated the two systems into one.

Q Prior to changing from using exclusively diesel oil, I take it that the leakages or overflows from the diesel system would overflow from the double bottom tank and leakages and overflows from the gas-oil system would go into the gas-oil double bottom tank?

MR. WAESCHE: Your Honor, I object to this line of questioning.

No. 1, I don't believe it is proper redirect.

Secondly, it is grossly leading.

THE COURT: I am going to sustain the objection.

Q What was the purpose of the diesel oil overflow

tank?

MR. WAESCHE: Same objection with respect to the first part of my objection. Not proper redirect.

THE COURT: Sustained.

MR. DALY: Your Hnor, I believe Mr. Waesche examined the witness concerning the fact that as originally utilized, these tanks were separate, and I am merely trying to bring out through the witness the reason for the separation in the first instance, and the reason for whatever change may have been made in the second instance.

THE COURT: Aside from his objection, I really don't think that this is material and relevant to the issues we have before the Court.

Q Mr. Argyriadis, after the vessel started to use simply diesel oil, instead of diesel oil and gas oil, was there any purpose served in keeping the overflow double bottom tanks separate?

MR. WAESCHE: Same objection.

THE COURT: Same question, same ruling.

Q As of March 18, 1971, were the diesl oil overflow tanks and the light oil overflow tanks connected?

MR. WAESCHE: Your Honor, same objection.

THE COURT: I will let him answer that question.

A They were connected, yes, sir.

Q How were they connected?

A I was told at the time of purchase of the vessel that they were connected. I recall, I'm not sure, that there was a manhole between the two tanks removed.

Q Mr. Argyriadis --

THE COURT: You say a manhole was removed.

How would that connect the two tanks?

THE WITNESS: There was a division of bulkhead between the two tanks, as I was told. I never saw it. I was told the tanks were connected by removing the manhole cover.

THE COURT: You said removing the manhole. I wondered. You meant the manhole cover?

THE WITNESS: Yes. I'm sorry.

Q Mr. Argyriadis, have you ever designed any vessels?

A Many, sir.

Q What relationship would the design of a vessel and your function in designing of a vessel have with respect to the Classification Society, such as American Bureau of Shipping or Lloyd's.

MR. WAESCHE: This is not proper redirect examination, your Honor.

THE COURT: Sustained.

Q In your opinion as a naval architect, wouldn't the opening of the manhole between the two double bottom tanks, the diesel oil and the gas-oil tank be a matter which the American Bureau of Shipping would have to approve?

A No, sir.

Q Mr. Argyriadis, you have been directed to Trial Exhibit 54, which is a diagram of the fuel oil piping system.

Is that diagram to scale?

A No, sir.

Q Does it accurately represent the spatial relationships between the various items of equipment shown on it?

A Not at all, sir.

Q What is a schematic such as that designed to show?

A Simply where one pipe comes from and where it leads to.

THE COURT: While we are on the subject matter, you don't know that that isn't as built?

THE WITNESS: It is approved by Germanischer Lloyd as built. That's what it says in German, or I believe so. To my own personal knowledge of it, no, sir, I don't.

Q For example, Mr. Argyriadis, I note that the leakage tank which has been encircled in red on Trial

* * *

labelled an item called "Hand Pump." And adjacent to it is another item which appears to have three valves on it.

What is that figure showing the three valves?

A That indicates a valve chest or three valves with pieces of piping between them interconnected.

Q I believe you testified under cross-examination that in normal course of operation, these valves would remain open, is that correct?

A There would be no particular reason to close the valves. In fact, for safety precautions in case of overflow of the leakage tank, you would have the valves open so they would go back into the overflow tank.

Q Is the piping that leads from the leakage tank through the valve chest, and ultimately to the double bottom tanks, is that piping at the top of the leakage tanks so that in order for the leakage tank to overflow, the leakage tank would have to be filled to the top?

A No, it is at the bottom, sir.

Q Mr. Waesche, I believe, asked you whether in your opinion the type of save-oil system shown on Exhibit 54 was in accord with proper engineering and design practices, and I believe you indicated it was.

Then he asked you a further question, I believe,

whether it would have been in keeping with good engineering practice to design the overflow piping from the -- or, rather the save-oil piping to connect directly into the overflow tanks rather than passing through the leakage tank and valve chests, and I believe your answer to that was also yes, that would be acceptable.

Q Have you personally ever designed a vessel with a save-oil or save-all system in which the save-all system connected directly to the overflow tank?

MR. WAESCHE: Your Honor, I object to that as improper redirect.

THE COURT: I will let him answer.

A Yes, sir, I have.

Q Do you have such a diagram of the vessel or piping fuel system with you?

A Yes, sir.

Q Would you produce that, please?

MR. WAESCHE: Now I object, your Honor, very much so.

THE COURT: I will sustain it.

MR. DALY: Your Honor, this was raised on cross-examination and I merely want to elaborate and confirm the witness' testimony.

THE COURT: He has already said it. Production

MR. DALY: I think the record should show that sketch was prepared by Mr. Juliano and was exhibited to Commander Plonk, and he said he saw no such connection between the vent line and the save-oil line as depicted in Mr. Juliano's sketch, and I believe a fair reading of the testimony of the second engineer will indicate that he accepted this sketch for very, very limited purposes, and said it is not correct, it is not exactly like that.

I think a reading of the entire testimony would be at least pertinent to those portions, which is one of the reasons I really object to the kind of piecemeal introduction of certain portions of it at this time.

THE COURT: All right.

W A L T E R C. M A C L E A N, called as a witness by the defendant, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. JULIANO:

Q Captain, by whom are you presently employed and in what capacity?

A Presently employed by the U. S. Government, Department of Commerce, Maritime Administration, at the Merchant Marine Academy, Kings Point, as Head, Department of Engineering.

* * *

proportion of your professional time has been managerial or administrative rather than teaching?

A I would say probably about three-quarters.

Q As I understand it, during that time you have been devoting your professional time primarily to preparing budgets, doing faculty and staff recruitment, planning facilities, evaluating performance of personnel in your department at the school, is that correct?

A That's the bulk of it.

Q From 1965 to July 1972, most of your professional time was involved in teaching courses in structural mechanics, strength of materials, and performing some research in the field of ships' structures, analyzing model scale tests, analyzing,developing experimental data, preparing technical reports and so forth; is that a fair summary?

A Yes.

Q Did you engage in any actual ship design or construction work during the period 1965 to 1972?

A Only on a consulting basis.

Q Have you ever in your professional career actually designed a major vessel from keel to top of the mast?

A No, sir.

Q From the period 1959 to 1965, you were at the University of California, and you were involved largely

field and one works in many areas depending upon what the demands are. I have done drafting work, I have done detailed computations, I have done feasibility studies, I have done survey work, ship-checking, heating, ventilating design. Whatever happens to come along in a situation.

Q Have you ever represented the owner or purchaser of a ship for purposes of a construction, acting as the owner's consultant on construction of a vessel?

A No, sir.

Q Have you ever been on board a ship to see that she was put through a special or other classification survey by one of the --

A I have.

Q What vessel was that?

A When I was going to sea I sailed with U. S. Lines and American President Lines and American Mail Lines and we were through several inspections of various categories over the years.

Q You weren't a naval architect at that time, were you?

A I was a marine engineer.

Q You weren't a naval architect at that time?

A No, sir.

Q When you say marine engineer, do you mean you had

* * *

have any diesel vessels. It was all steam vessels.

Q There is a vast difference in the power plant of a diesel or motor vessel as compared to a steam tanker, reciprocating or turbine-driven vessel, isn't that so?

A That's true.

Q What license do you hold, that is, what maritime license do you hold?

A I presently hold a chief engineer's license unlimited.

Q Have you ever sailed as chief engineer?

A No. Only as first engineer.

Q Is there a chief engineer for steam vessels or for motor vessels or both?

A It is a steam engineer.

Q Your qualifications for a chief engineer of motor vessels are different from the qualifications of a chief engineer for steam turbine vessels, is that not so?

A They are to a degree, that's right. It depends primarily on service and certain parts of the license examination.

Q During the period 1946 to 1952, were you doing primarily day work, what is called day work, on board ship?

A I did both watch-standing and day work.

Q What is day work as opposed to watch-standing?

A Well, the day work usually is an eight-hour, forty-hour week kind of an arrangement, although in those years some of the times it was forty-four hours a week before they reduced it to forty, in which case this was primarily maintenance and overhaul of the various systems throughout the power plant and the ship.

Q While you were on day work you were not in charge of a watch, were you?

A While on day work, you are usually in charge of the people that were on watch, but you didn'thave the direct watch-standing responsibilities during that time.

Q According to your resume, during the approximately eight-month period between July 19, 1945, to March 1946, you were third engineer on steam and diesel power vessels of the United States Lines.

What diesel-powered vessels of United States Lines did you serve on?

A The American President.

Q How long were you on that vessel?

A I guess that was probably about four months, I guess.

Q What is the size of that vessel?

A She had twin engines on a single shaft, 4000

combined horsepower.

Q What was the overall length of the vessel?

A She was a C-1, about 410 feet, I think, between perpendiculars.

Q And the service on that vessel, does that represent the sum of your seagoing experience on motor vessels?

A No. I had sailed on a motor vessel when I first went to sea, on the Doxford, before I was licensed, and I spent about seven months on the Doxford.

Q What was your rating or capacity on that vessel?

A Cadet.

Q Did you stand watch at that time?

A Yes, I did.

Q Were you in charge of a watch on that vessel?

A Not legally but that was during the war and some people who sailed on that vessel had never been to sea before and my watch partner through a good portion of that time was a man who had been on ferryboats and had never had a deep sea position, and consequently he was very much dependent upon my services.

Q You felt you were competent even though technichall you didn't have your license?

A I didn't feel I was competent but it was a matter of rising to the occasion.

Q Did you rise to the occasion?

A When we had to, we certainly did.

Q Have you ever served on board a tanker in any capacity?

A No, I have not.

Q Actually your last sea experience was approximately, would I be correct, approximately 23 years ago?

A In a paid capacity for that, yes.

Q 1952, I believe, is the last day you indicate in your resume, as having sailed, and that as an assistant engineer, is that correct?

A Yes.

Q Dr. Maclean, I note that in your listing of publications, in your resume, that you have co-authored several articles and understandably I would like to examine some of the materials you did in preparation for this examination; but had you ever had any article published under your own name?

A No. That hasn't been my pleasure.

Q I also note in your resume that you have listed your consulting activities, and you have indicated here seven firms, three of which appear to be law firms, and I suppose you may now add Bigham, Englar, Jones & Houston to make a fourth.

What kind of consulting work have you done for these firms other than the law firms?

A The other firms listed there?

Q Yes. Todd Shipyards, for example.

A That had to do with some numerical procedure development for automated design of vessels. The idea was to try to establish a automated procedure for carrying out the basic design of a naval vessel in that particular case, and for-- I'm not sure which ones are all on that list now but Texaco, why, it had to do with some tanker structure problems where they were contemplating buying some vessels on a design that turned out to be very poor, and some of it had to do with L & G, J.J. McMullen, had to do with L & G thermal investigation, and Morris Guralnick had to do with vessel rigging and ship alteration requirements for special contracts.

Q The firm you list here, I believe you mentioned, Morris Guralnick, was that a firm by which you were formerly employed?

A Yes, it was.

Q In your direct testimony, you state that you reviewed a diagram of the Trade Daring's save-all system prepared by Captain Halboth, is that correct?

MR. JULIANO: Objection,your Honor; identified

by Captain Halboth.

Q Identified by Captain Halboth.

Do you know who prepared that diagram?

A I understand it was prepared by Mr. Juliano under guidance by Captain Halboth.

MR. DALY: I accept the distinction.

Q Is that a diagram that has been marked Trial Exhibit 62?

A Yes, I believe so.

Q And I believe you stated that you also read Captain Halboth's survey report, is that correct?

A I did.

MR. DALY: Do you have a copy of that report, Mr. Juliano?

We have a copy of the report which was attached to the answers to the interrogatories but it might be convenient for the witness to handle a separate report, if you have it.

Q Is there a copy of the report you viewed, marked Trial Exhibit 61?

A Yes, that looks like it.

Q In addition to examining this diagram and this report, that is, the document marked Exhibits 62 and 61, have you actually consulted with Captain Halboth in

connection with this matter?

A Yes, we have met and discussed almost every aspect we can think of.

Q Had you ever been aboard the Trade Daring?

A No, sir.

Q Did you understand that Captain Halboth attended on board the vessel on approximately eight occasions?

A I don't know how many times he has been on board but I know he has been on board several times.

Q Did you ever go on board the Mobil Trader, the bunkering barge which was involved in this case?

A No, sir.

Q Captain Halboth stated, I believe, in his report, Exhibit 61, that his report was based in part upon conversations with the vessel's master and owner's representatives as well as review of available logbooks.

You never had any conversation with any of the vessel's personnel, did you?

A No, sir.

Q On page 1, of Exhibit 61, Captain Halboth's report, purely his background information, and it states in part as follows, and perhaps you would prefer to follow this as I read it from the Trial Exhibit 61.

"At 0042 hours on March 18, 1971, Mobil Trader

was instructed by Trade Daring to terminate delivery of oil. At 0050 hours engine room personnel observed oil flowing from the diesel oil side tanks through the related overflow side glasses and into the double bottom overflow tank.

"Although bunkering was again ordered terminated at about this latter time, oil was discovered flowing from the save-oil collectors surrounding installation above the No. 3 generator and splashing down onto this operating machine.

"At 0052 hours on March 18, 1971, in spite of efforts by the ship's force to protect No. 3 generator with tarpaulins, the overflowing oil ignited with resultant catastrophic fire."

When you reviewed Captain Halboth's report, I assume you read that portion of it?

A Yes.

Q Did you read his report carefully or shall I say, did you read it more than once?

A Well, I read it once and I think I have reviewed certain aspects of it again.

Q And you have also discussed Captain Halboth's report with him, is that correct?

A Particular aspects of it, in our discussions, yes.

Q In reading Captain Halboth's report, did you see anything in his report by way of comment on the physical evidence, on his observations, by way of conclusions or opinions in any way inconsistent with the two paragraphs I just read?

A Not that I know of.

Q As a matter of fact, on page 4 of his report, I believe he notices that the light oil and diesel overflow tanks were pressed up.

That would mean full to the top, would it not, Doctor?

A When I think of a tank being pressed up, it means it has entered up into the sounding tube above the top of the tank.

Q Would that observation be consistent with the two paragraphs I have just read you?

A The light oil tank overflows? The diesel oil if they were pressed up that would be consistent with the introductory statements, yes.

Q On page 5 of his report Captain Halboth states that he examined the No. 3 generator and noted that the fire apparently originated there.

Is that so?

A It states so.

* * *

depositions have been marked as exhibits in this case had been taken during the course of the visits of Captain Halboth aboard the Trade Daring and had all been concluded several months before his report, which is dated July 14, 1971?

A No, I didn't know of the time of events of these activities.

Q Did Captain Halboth ever discuss with you the fact that he had had the benefit of reading the testimony or at least having the testimony of the ship's personnel presented to him in the course of his surveys of the Trade Daring?

A No.

Q Have you ever examined the American Bureau of Shipping file on the Trade Daring?

A No.

Q I again show you Exhibit 62 prepared by Mr. Juliano with the assistance of Captain Halboth, as you testified, and on which I believe you stated that in part you based your testimony.

A Yes.

Q Did you notice in Captain Halboth's testimony, that is, in his diagram, that the vent line from one of the double bottom tanks, the center overflow double bottom tank,

A Yes, I can see the vent line.

Q How many vent lines are there in that particular tank?

A It indicates there is one vent line coming out of the tank.

Q Could you describe to us the path of travel of that line?

A Well, it indicates thatit comes out on the port side of the tank and that it goes transversely - it is hard to say exactly how far-- but then goes aft and apparently up the side of the shell until it finally emerges on deck.

Q It really doesn't go up straight vertically through the engine spaces at all, does it?

A Well, this is all engine space, but the elevation indicates that it goes horizontally for quite a ways through the engine space before it takes on its vertical rise up the side.

Q Almost at the skin of the ship, is that correct?

A Yes, it appears as though it goes up the side of the skin, yes.

Q Are you sure, Doctor, that you have never seen that drawing before?

A It doesn't look familiar to me.

MR. DALY: I would like the record to show that

* * *

Q Based on your review of Exhibit 54 and your review now of Exhibit 34, are those exhibits consistent with what appears to be depicted on Exhibit 11, namely, a marrying or connection of a vent line with a line leading from what appears to be a scupper and is marked "scupper"?

A The only consistency I can see between these two is the fact that in both Exhibit 34 and in this sketch there is indicated a horizontal run of piping with a vertical and there is a horizontal run of piping in this vent line, but there is no intersection of this vent line with another vent line or another element.

Q In that sense then, Doctor, would Exhibit 11 be inconsistent with Exhibit 62, in that Exhibit 11 shows a horizontal run of the vent line while Exhibit 62 appears to have the vent line in a vertical rise?

A Well, I don't think, as I understand the way this sketch has been put together, I don't think that this was meant to be other than schematic. It is like 54, in that Exhibit 54 is intended to show the juxtaposition of various systems rather than to show in either true manner or true elevation how any of the systems are actually laid out.

As I understand it, that's the context of this 62 also.

Q And 62, in that context, does appear to show the connection of the vent system with the save-oil system, is that correct?

A That's what I believe is the intention of this system, to show that there is an interconnection between the save-all system and the vent system for --

Q Let me just interrupt.

When you say intention of the system, you mean this diagram 62?

A The intention of Exhibit 62.

Q Have you reviewed Commander Cronk's testimony?

A I have not.

Q I show you, Dr. Maclean, Exhibit 53, which is a copy of the report prepared by Commander Cronk, and ask you if you have seen that before.

A It doesn't look at all familiar. No, I haven't seen this.

Q I invite your attention particularly to the diagram which constitutes the third page of this report and ask you specifically whether you had ever seen that before.

A If I have, I don't remember doing anything with it. I may have seen this. But I don't remember exactly under what circumstances I may have seen it. I do remember seeing something with some dripping down here.

Q Does that diagram depict a line running from the save-all system?

A Yes, it does.

Q Does it also depict an overflow line?

A Yes.

Q Do you see on that exhibit, on that sketch, any indication of a marrying or connection between the venting system and the save-all line?

A It is not indicated here. It simply indicates here that the drainage goes directly to the double bottom tank, but it doesn't indicate here the nature of the line that this drain basin connection enters into.

Q In any event, it does not indicate any connection between the save-all system and the vent system, does it?

A Not on this sketch. It is not identified as such.

Q The sketch which is a part of Exhibit 53, apparently shows a save-all line coming directly down from what is labelled "oil drain basins" and running right into the overflow-- I beg your pardon-- to the double bottom tank.

Is that same configuration shown on Exhibit 62?

A Not in the same fashion. I don't really know what circumstances this drawing was made under, and I gather that the evidence that allowed 62 to be made and this one here, are completely disassociated, independent, and how

* * *

jk:mg 1

Navieros Oceanikos, S.A., owner of the Liberian vessel Trade Daring,

v.

S. T. Mobil Trader, her engines, boilers, etc., Mobil Oil Corp., the owner of the Mobil Trader and Mobil Sales & Supply Corp., 72 Civ. 1225

v

Trade & Transport, Inc.

July 1, 1975
10:00 a.m.

(Trial resumed)

WALTER C. MACLEAN, resumed:

THE CLERK: You are reminded you are still under oath, Mr. Maclean.

THE WITNESS: Yes. Thank you.

CROSS-EXAMINATION (continued)

BY MR. DALY:

Q Dr. Maclean, yesterday I asked you whether you had read the transcript of the testimony of Commander Cronk that was taken in Washington last week, and you indicated that you had not.

Have you had an opportunity to read that testimony since I questioned you yesterday?

A No, I have not.

Q Have you had the benefit of having that testimony of Captain Cronk reported to you or summarized for you?

A Well, I know that there are certain statements that he has made concerning the nature of the system, but I'm not aware of the details of it.

Q Well, were you given the sense of this testimony, and I'm now reading from Exhibit 58 of Commander Cronk's testimony, beginning on page 23, line 19:

"Q What was the approximate size of the oil drain lines which have been described on the exhibit you have marked by inking in with the black ink or pencil?

"A Those lines are approximately one inch wide.

"Q Do you recall" --

"A There were several that made up the system. They were varying in size. Actually the main line here was approximately one inch.

"Q What was the size of the vent lines coming from the double bottom tanks?

"A I did not pay any particular attention to the vent lines. All I did was to see if what the arrangement

was. It appeared to be normal vent lines, standard vent lines."

Were you given the import or sense of that testimony by Captain Cronk?

A No, I wasn't.

Q Were you given the import or sense of this testimony which I will read, beginning on page 25, at line 21:

"Q In the course of your inspection, did you notice any diesel oil day tanks?

"A Yes.

"Q Did they all appear to be in a proper order?

"I note you did not have them indicated on your sketch.

"A I examined the tank, and I saw its relationship to the general layout, at least on the port side. I can remember the port side particularly. As far as being in proper order it looked like there wasn't any damage to them or anything of that sort. I can say they appeared to be in proper order. Whether they were actually -- I don't know how to interpret your meaning of "proper order." If they appeared to be intact in the way originally built, they appeared to be that way, yes."

Were you given the sense or import of that

testimony?

A No, I wasn't.

Q You were not?

A No.

Q On page 2 of your prepared direct testimony, in furtherance to Question 4, you refer to United States Coast Guard Rules and Regulations, United States Coast Guard Marine Engineering Regulations, as being applicable to the construction of the Trade Daring; is that correct?

A No. But as being indicative of accepted practice.

Q Accepted practice as of what time, Doctor?

A Well, as of present practice, so far as the date of the regulations.

Q What were the effective dates of the regulations you were referring to in that answer?

A Well, I think the latest regulations that are in effect date from around 1969. I believe that they have not been changed significantly since then.

Q Would those regulations in effect in 1969 be in any way applicable to the Trade Daring which was built in 1955?

A Only in that they reflect accepted practice, yes.

* * *

Nippon Kaiji.

Is it your opinion that these rules have any direct effect on the construction of a vessel that was completed in 1955 and classed under ABS and Germanischer Lloyd?

A The intention in this reference is to identify that this is good marine practice as of that time.

Q As of 1971?

A That is correct. And this does not change in any significant way from what was recognized in 1974. The intent was to show that the wording is essentially the same, the intent is essentially the same, and that be it.

Q And my question, though, Doctor, was whether you took the position that these rules in 1971, of the various classification societies, had any direct application to a vessel constructed in 1955, namely, the Trade Daring?

A There is no intent, in my view, that those rules should be applied to that vessel to bring it up to that level if it was not.

MR. JULIANO: May we have the record clarified? I believe Dr. Maclean mentioned 1974.

Did you mean 1974?

THE WITNESS: 1954, excuse me. Yes.

Q Doctor, is it logical to apply a particular rule from a particular classification society in isolation to a vessel that has been constructed in accordance with the rules of a different classification society?

A The rules give guidance and the rules for one classification society in general reflect the same kinds of considerations as the rules for the other society.

The intention of the reference was to show that the intent of the rules is virtually recognized throughout the world by all of these classification societies.

Q Dr. Maclean, isn't it true that under the rules of one society, the society may permit the installation of a tank of a particular size which is prohibited under the classification rules of another society because that second society adds some additional safeguards or qualifications in design and the sizes of the tanks?

A There is variation between the requirements of the various societies.

Q Referring to pages 9 and 10 of your prepared testimony, Question 20, you state that the vent system --

MR. JULIANO: Your Honor, can Mr. Daly read the question to give the doctor the benefit of what he is being asked to testify to?

MR. DALY: I will be very happy if the doctor

would have a copy of his testimony before him.

(Handed to witness)

Q You state, do you not, that there was a violation of the 1954 American Bureau of Shipping Rules in that the vent piping system was compromised on the trady Daring because inflammable gases and fuel were able to vent into the engine room.

You continued by saying, and I quote:

"The reason for this is because the vent pipeline was directly connected up with the save-oil pipeline."

Now, the premise, the factual premise, of your conclusion that there was a violation was Captain Halboth's sketch showing the connection of the save-oil and the vent lines, is that not so?

A Correct.

Q And if that sketch were incorrect, your conclusion would be incorrect, would it not be?

A To the degree that this connection was not made, yes.

Q What was the size of the vent lines from the overflow double bottom tanks?

A That I'd have to refer to the plan.

Q Is this the plan that you had not seen prior to yesterday, Exhibit 34?

* * *

Q At what point in the double bottom tanks did the save-oil line enter; was it at the top,at a lower level, or in the bottom, if you know?

A I'm not exactly sure to which yo refer in this case. What lines are we talking about?

Q The save-oil lines.

A You mean with respect to Exhibit 54?

Q With respect to Exhibit 54, if you will.

A The save-oil line coming down to the leakage tank?

Q As it enters the double bottom tank.

A I'd have to look at the plan to identify that.

In the line 637, which connects the overflow tank for the gas-oil side tank to the three-valve manifold, there is no indication as to how far down the line goes into the tank, but the arrow on the line indicates that this is a suction line and consequently one would expect that the connection to that tank would be such as to take the line down close to the bottom.

Q Do you see the word "oelgraben," o-e-l-g-r-a-b-e-n in that diagram, Exhibit 54?

A Oelgraben?

Q I will withdraw the question, Doctor. I believe you have adequately indicated the probable location of the entry of the save-oil line into the double bottom tank by

indicating that it is a suction line which would normally be found at or near the bottom.

In normal operation of a vessel with a plant such as had the Trade Daring, after five days of normal operation at sea, approximately how much would you expect to find by way of leakages, drippings and so forth from the various engines and auxiliaries in the double bottom tanks?

In other words, assume the tanks had been pumped out at one point in time, and then the vessel continued to operate thereafter at sea for some five days, approximately how much drippings and collections would you expect to find in the double bottom tanks after that time?

A In this overflow double bottom tank on the starboard side?

Q In the overflow double bottom tanks.

A You are referring to this tank that says "Overflow tank for gas-oil"?

Q I refer to both double bottom tanks.

Well, Doctor, do you have any feeling for the quantity that would probably be running off during that period of time, over a period of five days, through drippings and leakages and drainings and so forth; do you have any feeling at all?

A Yes, I do. If I were to operate this system and

that double bottom flow tank were empty at the beginning of a five-day period, it would also be empty at the end of the five-day period because this system indicates that the leakages from the operating engines and from the drip collection,save-oil collection system, should go into the leakage tank, and that the contents of the leak tank should be pumped out by the hand pump and discharged either to the boiler or over to this heating oil side tank.

Q What is the capacity of that leakage tank?

A It is about 500 liters I understand. The indications on this plan are that there should be no normal flow from that leak tank into the overflow double bottom tank.

Q Doctor, didn't you just describe before the path of the save-oil line from the double bottom tank to the leak tank, indicating that that was normally a suction line?

A That is correct.

Q And if the valve were open,as the tesimony says it was,in normal operation, there would be a discharge from the leakage tank into the overflow double bottom tank providing a certain head had been attained in the save-oil system?

A I haven't testified to that, but your witness did testify to it, and I was here and heard it, and I would presume that that is the only way that the oil could get

from this leak tank down into the overflow double bottom tank.

I would suggest, however, that that is not the way to operate this system.

THE COURT: There is no intention on the diagrams here to indicate that it was ever to be operated that way.

Q This may be irrelevant, Doctor, because it seems to be based on an assumption that no longer seems tenable, but if the vent line from the double bottom overflow tanks were designed to rise vertically from the engine room, as I believe is described on Exhibit 62 prepared under the direction of Captain Halboth --

MR. JULIANO: I think it is only fair at this time to point out that the witness has testified that this is merely a schematic diagram. It was not meant to show the actual path and travel of that vent line.

I think the witness has testified to that.

MR. DALY: I will withdraw the word "vertically" then.

Q Assuming the vent lines from the double bottom overflow tanks were designed to rise from the engine room and married or connected with the relatively small save-oil drain line, the vapors from the void space in the double

bottom tanks would naturally be drawn up from the large vent line to the fresh air rather than find their way into the small save-oil drain lines which are only one-sixteenth of a cross-sectional area, isn't that so?

A No, that is not so. The vapors from these oils are heavy and they will issue from the lowest possible point that they can, and in the case of the schematic that was prepared, Exhibit 62, is it, if there were vapors being generated that could come up through the vent lines or be forced up through the vent lines, they would issue through the lowest level opening that they could find. They would then go on up to the higher level opening. If the volume of vapors being emitted were too large to, was too great to be fully relieved by the lower level line, they would finally fill the whole system, but they would normally come through the lowest level most readily unless there is excessive flow.

Q And all of your testimony, Doctor, is based on the premise that the vent line and the save-oil line are married at some point, is that correct, or connected, as shown in Exhibit 62?

A The premise, I believe, of the testimony that has been submitted here is on the basis that those connections exist. I'm not exactly sure whether there is anything in this at all. I don't think there is anything in here at all

that refers to this. I don't think I saw this until after this was already prepared.

MR. WAESCHE: May the record indicate what you are referring to, this and this?

THE WITNESS: Excuse me. I don't believe I ever saw Exhibit 54 until after my testimony had been prepared.

Q Don't feel bad, Doctor. You did not even see Exhibit 34, the plans for the vent system,until they were presented to you yesterday, isn't that so, by me?

A Yes. I don't have any recollection of reviewing that.

Q Have you had any discussion with counsel or defendant since that time as to why you were not shown these plans?

A Well, we did discuss it and came to the conclusion that it did not enter into our discussions, so there was no need for it.

Q Doctor, how many of the questions that you answered, in the course of your written presentation of your direct testimony related to the vent system.

A Well, by and large, most of it relates in one way or another to a ventilation drainage system that has been identified by vessel inspection.

Q Doctor, at page 3, Question 8 of your direct

testimony, you state that in general no fuel oil tank vent should be so installed or operated that flammable vapors or liquids may be discharged in the space which contains a source of ignition.

What is the flammable liquid you were referring to there?

A In this case, any source of flammable product, whether it be fuel, whether it be a gasoline-type product, a petroleum product.

This has to do with the design, construction, installation of fueling systems.

Q Doctor, I don't like to interrupt. I asked you a simple question.

What did you consider to be the flammable liquid you were referring to? And I think the sense of your testimony, and you could have stopped there, was that you considered the diesel oil involved in this case the flammable liquid; is that correct?

A Well, this is what has been taken on board,and apparently is the source of the fire.

However, this is true of any fuel that is loaded on board.

Q Isn't it a fact that United States Coast Guard and most petroleum handlers make a very important

* * *

Q You don't purport to be an expert in the nuts and bolts of petroleum handling, I take it?

A So far as field classification, I haven't spent that much time worrying about it.

Q Referring to Plaintiff's Exhibit 26, which is the tanker manual of Socony Mobil Oil Company, the defendants, or their affiliates, Grade E --

MR. JULIANO: What page are you on, Mr. Daly?

MR. DALY: Page 54. Chapter 6-1-1.

Q Grade E is described as "any combustible liquid having a flash point of 150 F. or more (heavy diesel fuel oils, diesel oils, lube oils, asphalts, tars, etc.)."

MR. JULIANO: Correct, that means heavy fuel oils, diesel oils, lube oils.

MR. DALY: I think I read it that way. Heavy fuel oils.

MR. JULIANO: You said "heavy diesel fuel oils."

Q Does that refresh your recollection as to what category a diesel oil would come within?

A According to this it would be Grade E.

Q Grade B, according to this same manual, in the same section, same page, is any flammable liquid, and it includes automotive and aviation gasolines, some unfinished gasolines.

Would that refresh your recollection generally as to the items that come within the Grade B classification?

A Yes.

Q Vessels carrying flammable liquids are subject to much more stringent regulations and operating procedures than those carrying combustible liquids, are they not?

A That is correct.

Q And anyone concerned with cargo safety and particularly anyone operating a tank vessel or anyone intent on complying with Coast Guard regulations would have to keep that distinction, that is, between flammable and combustible, very carefully in mind, would he not?

A So far as the systems are concerned, that is quite correct.

Q May I take it that in your answer, where you refer to flammable liquids, you were using that term more in the layman's sense rather than in the technical sense that might be used by petroleum handlers, would that be correct?

A That would be correct.

Q You are aware, are you not, Doctor, that the vessel was constructed under Joint ABS and Germanischer Lloyd classification rules when she was constructed for the German owner, is that so?

A Yes.

Q And you are aware that the vessel was continued in class by the ABS after she was sold to the plaintiff and named the Trade Daring, is that correct?

A Yes.

Q And you understand that she was fully in class without any outstanding recommendations or notations for items to be corrected according to the records of the American Bureau of Shipping covering the period March 18, 1971.

A Yes. I understand so.

Q Were you aware that the vessel had been surveyed in Germany in late February 1971 by the American Bureau of Shipping?

A I understand that.

Q You never reviewed the records of ABS in the course of this proceeding, did you?

A No, I have not.

Q Is the sum of your testimony, Doctor, that the vent line system for the fuel tanks and for the overflow tanks and the save-oil system apparently approved by Germanischer Lloyd and ABS were improper or not in accordance with the rules of the societies at the time the vessel was constructed?

A I believe this Exhibit 54, which indicates the save-oil sytem here through the leakage tank and so forth, with properly fitted valves and all, would be in conformance with the requirements, yes. I believe this is so.

It is my understanding, however, that the ship check of the same indicated that this was not the system installed.

Q That was not your ship check, was it?

A That was not.

Q Whose ship check was it?

A I understand that this was by Captain Halboth and by Captain Neal who was with him, and by the Coast Guard officer, who had an independent investigation.

I also understand that the --

Q Well -

MR. JULIANO: Let him finish.

MR. DALY: Well, he had paused.

A -- I also understand that the testimony by Mr. Bafalukos and Mr. Spetsiotis is consistent with these reports.

Q Well, Dr. Maclean, you heard me read from Commander Cronk's testimony, did you not, just before?

A I heard you read some things, yes.

Q And didn't his testimony and even more particularly

* * *

reference, 1953, Germanischer Lloyd, Storage of Fuel. Installation of fuel tanks, fuel storage tanks,and bunkers are to be so installed and equipped that they are not unduly heated by the engine and its piping as well as by the auxuliary boilers or heaters or that fuel or inflammable gases cannot discharge into the engine or boiler room,and I think this is a very clear statement of what in principle had been stated before.

You can find numerous references to similar situations.

Q Yes, Doctor, and when you are asked in the succeeding question, on page 7, how was this rule violated, you said that this was violated, and I quote: "Since the save-oil piping, which is connected to the vent pipeline, leads into open drains which are located," etc.

In other words, you were basing your finding of violation of the rule on the marrying or connecting of the vent line with the save-oil pipeline as depicted in Captain Halboth's sketch, is that correct?

A Well, in addition to this, there is also the overflow discharge from the day tanks which discharged directly into the open collection basins and this clearly vents the vapors of that tank routinely into the engine space and allows for the direct overflow of the fluids into

* * *

appeared to be normal?

MR. JULIANO: Objection.

A No, actually I'm trying not to speculate because I don't know what he saw. He did not mention it.

Q What particular tanks were you referring to as the overflow proceeding into the open basins, what particular tanks?

A Well, in this case there is the overflow from-- on Exhibit 62, and I believe these are day tanks that had overflows. These are the port, starboard day tanks, indicated on Figure 62, that indicate an overflow directly into the save-oil basins.

Q Were those day tanks being filled according to any of the testimony you have read or any of the exhibits you have examined; were those day tanks being filled at the time of the fire on board the Trade Daring?

A The testimony is that they were already filled.

Q And in normal course-- strike the normal course-- these day tanks could not be filled directly from outside the vessel, could they?

A That is correct, they were normally filled using the purification system, the DeLaval purification system.

Q And that purification system involves having a pump going, is that correct?

A Yes. Yes.

Q So there is no indication in any of the exhibits you have reviewed-- and I have particularly in mind Captain Halboth's survey-- or any of the testimony you have reviewed indicating that these day tanks were in any way at that time involved with the overflow, is there?

A Nothing that I know of.

Q Thank you.

Occasionally, Doctor, a pipe or fuel line will break under pressure in an engine room causing spray of combustible liquid into the area where there is a source of ignition, isn't that so?

A This has, in the history of plants, been a cause of some concern, yes.

Q You really can't get away from sources of ignition in an engine room, can you? There are generators, there are hot engines, many sources of ignition in the average engine room, isn't that so?

A That is correct.

Q As a matter of fact, it is really impossible to design a foolproof, fail-proof engine room to prevent oil from some source coming into contact with a source of ignition, isn't that so?

A Not in normal operations. A failure is not normal.

* * *

Do you disapprove of the use of save-oil basins around various non-structural tanks such as some of the tanks that were in the engine spaces of the Trade Daring?

A If properly fitted and installed, no.

Q As a matter of fact, the ABS rules of 1954 expressl provide for save-oil basins around certain tanks, do they not?

A Yes.

Q Strictly speaking, Dr. Maclean, are the overflow tanks designed as fuel tanks and intended for fuel storage or bunkers or are they really overflow tanks to serve only in case of overflow or to collect drippings and drainages?

A As I see it, they are designed in accordance with the piping here as overflow tanks. For instance, the piping would indicate that some of the overflow may be unacceptable overflow and consequently would be pumped off into the boiler fuel system.

So that there is no intention that these be normally used for the storage of bunkers. They could be, but it is not set up so that would be its expected use.

Q Now, you go on to say, on page 7, in answer to Question 17, that"even if there were no overflow of oil, the system would still violate the classification rules since it permits the escape of inflammable vapors through

the same open basins."

That again is based on this sketch showing the marriage or connection of the lines, was it not?

A That is correct; without adequate valving, without adequate vlaving isolation.

Q Well, the save-oil system as depicted in Exhibit 54, normally there would be no fuel or oil vapors passing through the save-oil line, through the valve chest, leakage tank, and so forth, would there?

A Normally all those valves should be closed.

Q That would mean building up a head of fuel or drippings that have come from the various save-oil basins, would it not?

A In the basins.

Q In the basins?

A That is correct.

Q Then the basins might overflow, is that correct?

A No, normal watch procedures would be that if there was leakage into these basins, then the valves would be periodically opened to allow the leakage to go down into the save-oil system and then shut off.

Q Is it your testimony that the save-oil basins are to be permitted to fill up?

A Not to fill up, no. Only to collect the drippings

that may come there. Drippings, say, for instance, in the oil filter basin, would not be anormal rapid gushing. They might be associated with the leakages when the filters are cleaned and worked with and in which case the accumulations could be drained off as they are needed.

Q In heavy seas, the vessel pitching and rolling, the basins would slosh over onto some of these hot surfaces below, would they not?

A I understand that the basins are of such deptch that a reasonable level can be attained.

Q What is this depth?

A I understand, somebody told me that they were the order of six inches or so.

Q Who was that someone who told you that?

A I believe that Mr. Halboth, Captain Halboth had indicated that they were not trivial.

Q Did you read Captain Neal's report to Mobil's house counsel, Mr. Thacher White, a report that was marked Trial Exhibit 57?

A I did review it, yes.

Q When did you see that for the first time?

A Oh, I believe I have a date on my copy that says the 5th of June.

Q Well, you received it a long time before we did,

Doctor, and we had asked for it years ago, in interrogatories, but you say you did see it on the 5th of June, is that correct?

A My memory is that that is the date I have written on it.

Q Did you accept as a fact the venting system depicted on Exhibit 34-- that was the one which you saw for the first time yesterday -- would you agree that that was a proper venting system?

A Yes, that looked to me as though it was in accordance with requirements.

Q Doctor, as we mentioned before, much of your testimony, if not most of your testimony, is based on the Halboth sketch, Exhibit 62.

Do you think a substantial portion of your testimony would have been materially different if you had seen Exhibit 34 in advance, that is, the venting diagram?

A Well, if I were to make a statement as to whether the piping system of Exhibit 34 were in accordance with the rules, that would appear to me to be a simple question.

Q Well, I will give you a not so simple question or no question by repeating the one I gave you.

If you had seen Exhibit 34 prior to yesterday,

would your testimony concerning the venting system of the Trade Daring have been considerably and materially changed?

A In view of my understanding that Exhibit 62 represents the connections of the system, it would not be changed.

There's many a slip between the design and the ship and the ship check seems to me to be important from my discussion.

Q The ship check by Captain Halboth?

A Or anybody else that can substantiate what the system is.

Q Do you have any indication from anyone other than Captain Halboth that the venting system is as he described it on 64?

A I believe there is testimony by Mr. Spetsiotis and Mr. Bafalukos that the observations are consistent with what Captain Halboth has indicated, and I believe also that Captain Neal has indicated that they saw the same things, and also Commander Cronk indicated a similarity between their observations, so that I think there is ample justification to believe that this is a better representation of the interconnections of the system than Exhibit 34.

MR. WAESCHE: "This" referring to what, Doctor?

* * *

a later reference you make to the U. S. Coast Guard Marine Engineering Regulations on page 12, in answer to Question 25, would I be correct that the regulations you cite would not under the terms of the regulations themselves, be given retroactive effect to a vessel such as the Trade Daring constructed in 1955?

A As before, retroactivity is not something you can have. The intent here is to indicate that this is common practice, and these regulations have not changed in decades.

Q But the regulations themselves --

THE COURT: All right, Mr. Daly, you have asked it six times.

Q Well, let us now switch to another subject, Doctor, and this is the various comments and criticisms that you make concerning the bunkering of vessels commencing on page 14 of your direct testimony.

You refer to being a member or in charge of a fueling party on numerous occasions during the nine-year period of your seagoing experience, and I think that we agree that your last seagoing experience was approximately 23 years ago, is that correct?

A That is correct.

Q And since that time there have been numerous

regulations promulgated by the Coast Guard and other official bodies of other nations concerning the transfer of bunkers, transferring of cargo, in other words, to avoid oil pollution, is that correct?

A Yes, there are new regulations that are just going into effect now in this regard.

THE COURT: I hope we are not going to get into pollution because if you try to get into that, I'm going to cut you off entirely.

MR. DALY: Let me just ask one question, your Honor.

THE COURT: We all know that oil spills out of a boat, all right? So let's go from there.

Q Well, do you consider yourself sufficiently expert in the field of bunkering to be familiar with all of these various regulations on a day-to-day nuts-and-bolts basis?

A No, they have been changing much in the recent past and I have not, other than in more than a general way, kept up with them. I know the intent and I understand the liability requirements that they are now placing, but the specific regulations I'm not conversant with.

Q But you are not a bunkering expert in the sense that you may be an expert in certain phases of naval architecture, are you?

A I know good practice on shipboard operations.

Q In spite of the fact that you don't know the current regulations?

A Absolutely, because we never spilled oil that we could avoid, and I'm certainly conversant with the attitudes regarding pollution.

Q On page 15, Question 33, you indicate as one of your criticisms that, No. 1, there was no one from the crew permanently stationed at the bunkering manifold on deck.

Were you aware, Doctor, that there was a man stationed on deck observing the filling of the only tanks that were being filled at that time, namely, the side tanks?

A The testimony I had was that he was in charge of the watch also and was going routinely about his business. He was not permanently stationed there. He moved up and down, in and out of the engine room on numerous occasions, calling people to the watch and so forth.

Q Doctor, do you understand that at the time of the bunkering there was a man on deck who was watching the filling of the side tanks?

THE COURT: I think the question has been asked and answered.

Q Your next criticism, No. 2, that there was no one

permanently stationed in the engine room watching the various tanks.

Would you want anybody at that time to be watching the day tanks?

A There are valves in there, and that is where the control is.

Q Well, aren't the day tanks already filled according to all of the testimony?

A But the valves for the side tanks are in the engine room, and the same thing with the gas-oil tank.

Q I'm talking now about the day tanks. Would you have anybody watching the day tanks?

A The testimony is that there is no activity with the day tanks, and consequently no need for it.

Q Would you have anybody watching the settling tanks at that time?

A No. There is no activity there either.

Q Would you have anybody watching the gas-oil tank?

A This was filled, yes.

Q That had been filled?

A It was filled during the early part of the watch, I understand.

Q Then it was closed off. Do you understand that, also?

* * *

of intercommunication between the bunkering manifold on deck and the engine room.

What type of communication did you have in mind?

A Well, we always used to use sound power communication so that the man on deck and the man at the valves would be able to communicate back and forth freely to close in or take whatever action was necessary in the fueling of the tanks, particularly if they did not fill at the same rate or for some reason or other you wished to change the flow condition.

Q In other words, when the tanks were filled, you'd have the man in the engine room communicate with the man at the manifold?

A Or the man watching the gauge communicating with the man on the valves so as to secure it, yes.

Q Well, if you had a man on deck actually watching the inflow of bunkers into the only tanks being loaded at the time, and he was able to walk across the deck in a matter of literally seconds and signal the bunkering facility to stop bunkering, would you really have a need for communications?

A I think the evidence here is that you certainly did.

Q After the overflow was first noted by ship

* * *

presumably by gravity into the receiving vessel, isn't that so?

A Or back down into the discharging system.

Q How long would a line-blowing operation take?

A Oh, it is a very short operation.

Q Approximately how long?

A A minute or two perhaps.

Q Pardon?

A A minute or two perhaps. It is a relatively minor--

Q And then you would let the lines drain?

A Yes,as soon as that is over, why, you'd be able to shut everything off and break the connection and away you go.

Q After about a minute or two of blowing the lines and letting them drain?

A It would depend upon the installation but I would certainly think that that would be more than adequate.

Q Coming to the last page and last question of your testimony, page 18, Question and Answer 39, you state that, in that answer, that the vessel has the ultimate responsibility for a spill because it has the ultimate capability to stop the flow of bunkers.

Is it your understanding that under the Coast

* * *

jk:mg 54 Maclean-redirect 183

AFTERNOON SESSION

2:00 p.m.

W A L T E R C. M A C L E A N, resumed:

REDIRECT EXAMINATION

BY MR. JULIANO:

Q Captain Maclean, I call your attention to Exhibit 62, and I ask you if the save-oil system of piping led directly into the double bottom rather than being connected to this vent line as depicted on this drawing; would that nevertheless be in violation of the various classification society rules and the standards of good marine engineering practice in the industry?

A Yes.

Q Will you tell the Court why?

A Because there is no means of control from the save-oil basins and any overflowing of the double bottom tank would allow the flow of the vapors and the fluid up through this system and right into the basin here at the oil filters.

Its basic flow, except for the vent connection depicted here, would be essentially the same.

Q Captain, yesterday counsel for plaintiff asked you various questions as to whether certain findings by Captain Malboth were consistent with two paragraphs located

on the first page of Captain Halboth's report, which is Exhibit 61.

Now I am going to ask you a couple of questions on Captain Halboth's findings, and before I do so, I show you Exhibit 14 and ask you if you can identify that.

A Yes. This appears to be the tank capacity tables for the Trade Daring.

Q I call your attention to this page for the port side tank.

A Port diesel oil side tank, yes.

Q Can you tell us at what elevation in the tank the overflow lines were connected?

A The indication is that there is an overflow at 43 feet,one and a half inches.

Q What is the distance from the top of the tank to the overflow point in the tank?

A Well, the maximum depth is indicated at 44 feet, nine inches, therefore the distance at overflow would be one foot, 7-1/2 inches.

Q Captain, I have prepared a simple line diagram showing theport side diesel oil tank and the starboard side diesel oil tank.

Would you just putthat dimension from the top of the port side tank to the point of overflow?

(Witness complied)

MR. JULIANO: Let the record reflect that the captain has written "one foot, 7-1/2 inches."

Q I call your attention to the capacity tables for the starboard side diesel oil side tank.

Can you tell us at what elevation the overflow line is located?

A It indicates 43 feet, 3 inches.

Q Now, what is the distance from the top of the tank to the point of overflow in that tank?

A Again, the depth is 44 feet. 9 inches, so this would mean one foot, 6 inches.

Q Would you kindly insert that dimension in this diagram?

(Witness complied)

MR. JULIANO: Let the record reflect the witness has written one foot, 6 inches.

Q Now I call your attention to Exhibit 61 which is Captain Halboth's report, to page 4, and I ask you to look at the measurements taken by Captain Halboth for the port diesel oil side tank and the starboard diesel oil side tank.

Now could you tell us what measurement he obtained on the port diesel oil side tank?

A He has indicated two feet, 8 inch ullage.

Q Before we go any further, would you tell the Court what you mean by ullage?

A Ullage is a derivation of the word "outage," and it indicates the distance between the top of the surface of the fluid and the underside of the top of the tank.

Q What reading did Captain Halboth obtain?

A Two feet, 8 inches.

Q Would you just indicate that on the diagram approximately? This is not to scale.

(Witness complied)

MR. JULIANO: Let the record reflect the captain is drawing a line.

Q Would you indicate that dimension on this side, Captain?

(Witness complied)

THE COURT: Did he find that for both tanks?

MR. JULIANO: I will get the next tank.

THE COURT: Where are we now?

MR. JULIANO: We are at the port side tank and let the record reflect that Captain Maclean has written 2 feet, 08 inches for the ullage in the port side tank.

Q Now, what reading did he obtain for the starboard diesel oil side tank?

A Two feet, 6 inches.

Q Would you please indicate that on this drawing?

(Witness complied)

MR. JULIANO: Let the record reflect that the captain has written 2 feet, 6 inches as being the ullage in the starboard diesel oil side tank.

Q Now, Captain, I refer you once again to those two paragraphs alluded to by counsel for the plaintiff yesterday, and I will read a portion of that for you:

"At 0042 hours, on March 18, 1971, the Mobil Trader was instructed by the Trade Daring to terminate delivery of oil.

"At 0050 hours, engine room personnel observed oil flowing from the diesel oil side tanks through the related overflow site glasses and into the double bottom overflow tank."

I will stop there.

Now, Captain, I ask you, with respect to the two ullage readings obtained by Captain Halboth, is that consistent with those two paragraphs?

A No, it is not.

Q Tell the Court why not?

A Well, the ullage of these two tanks would indicate that the level of the liquid in the tanks is below the

overflow level and accordingly if this level would be the correct level, then this could not cause an overflow in either of the tanks.

Q Why don't we label this liquid with your permission, oil, oil, and let's hatch that in.

(Marking)

MR. JULIANO: I offer that as Defendant's Exhibit 105.

xx (Defendant's Exhibit 105 marked for identification)

MR. DALY: No objection.

THE COURT: All right, it may be received.

xx (Defendant's Exhibit 105 received in evidence)

THE COURT: Ullage is the difference between the level of the fluid and the underside of the top of the tank, is that correct?

THE WITNESS: That is correct.

THE COURT: I just wanted to be sure I had that straight.

Q I call your attention to Exhibit 54, and you were asked certain questions this morning by counsel for plaintiff in connection with the leak tank system, and questions dealing with the opening and closing of the manifold valves, and in your opinion, should these manifold

valves be closed or open?

A They should be closed in normal operation.

Q Would you explain to us what the normal operation of that leak tank system should be?

MR. DALY: Your Honor, I don't think the question makes clear what the manifold valves are being discussed.

THE COURT: He is talking about the valve chest on line --

MR. JULIANO: --638 leading into the manifold chest and 637 leading out into the starboard double bottom light oil tank.

THE WITNESS: Actually 637 leads into the -

MR. JULIANO: Correct, you are right.

THE WITNESS: -- valve manifold. 638 leads into the valve manifold. And there are two lines, 637, one from the starboard double bottom tank,and one from the port double bottom tank, and one line,638, which leads from the leakage tank.

Q Captain, would you explain to us the proper and normal functioning of that system, to this Court?

A This system includes this leakage tank with a capacity intended to take the normal leakages that may occur from the operating engines and their fuel systems, and also from this save-oil system.

The leakages coming off of the diesel generators and the main engine would normally flow into this tank.

There is a sounding tube in the tank and there is a drain out of the tank that could be utilized, line 638, to draw the leakage from the tank through this three-valve manifold by means of the hand pump and discharged in three lines, line 640,line 642, and line 641.

Q Let me ask you this, Captain, if I might interrupt:

What would happen to the utility of the leak tank if the valves were kept open?

A If the valves were kept open, the normal leakage coming into the tank would fill it. When it would fill, it would-- if further leakage came in, it would develop a head which would --

Q What would that do to its utility?

A If it filled it, then clearly it has no more capacity for accepting leakge, and it would simply have to overflow into other systems.

If the three-valve manifold valves were open, three-valve chest manifold were open, then presumably it would gravitate from the tank to this manifold. As a head developed on the tank it would force the fluid up into the manifold, and down through whatever openings there were,

in which case it might go on over into the starboard double bottom tank in a reverse flow operation.

There is no indication here whether these valve disks on this manifold are for a one-way flow or a two-way flow,and I have not found anything on the drawing to indicate this.

Q But in that manner, the valves are left open,would it act as a reservoir anymore?

A Only to the extent that it could fill, and then it would be no reservoir.

Q In your opinion, is this system supposed to operate with the valves closed or with the valves open?

A With the valves closed.

Q Captain, early in your testimony this morning you referred to several individuals all agreeing in the way the layout of the piping system was in the engine room; that being Halboth, Neal and Cronk, and you mentioned two other names, Spetsiotis and Bafalukos.

I wonder if you would tell the Court who those individuals are?

A I understand that Mr. Spetsiotis is the individual who had the second engineering position on the vessel,and Mr. Bafalukos was the third assistant engineer.

Q You were asked a question earlier this morning abou

what Mr. Spetsiotis did in closing the main line, if that was the proper thing to do.

What would be the first valve to close?

A The valve on deck.

Q I am going to ask you one other question, and that is, with respect to blowing the line, you were asked a few questions about blowing the line, and what this entailed, and this is what is called a stripping operation, is that correct?

A That is correct.

Q And how much pressure is --

MR. DALY: Objection.

MR. JULIANO: I will withdraw it.

MR. DALY: Would the record reflect or will counsel concede that blowing of the lines is not the stripping operation?

MR. JULIANO: No, I will not concede that.

Q What pressure is developed when you are blowing out a line?

A Very low pressure in the range of maybe one or two to perhaps as much as five pounds per square inch.

Q Is that much pressure?

A Not for the filling system, no.

MR. JULIANO: Thank you, Captain.

THE COURT: Mr. Juliano, may I remind you of something? Yesterday we had a problem with respect to the captain's report and Exhibit 54.

In my opinion, Mr. Daly opened the door. I will give you an opportunity to redirect the captain with respect to Exhibit 54 at this time so that we don't have a memo coming in a month later and then he can recross with respect to your redirect.

Do you want five minutes to talk it over?

MR. JULIANO: May I be permitted one minute, your Honor?

THE COURT: You have five. We will take a short recess.

I want to avoid papers and get it in the record.

(Recess)

BY MR. JULIANO:

Q Captain Maclean, referring once again to Exhibit 54, and calling your attention to the leak tank system on that blueprint, do you have an opinion as to whether or not that leak tank system is an efficient system as designed?

A I would say that it is a relatively inefficient system even though it may be effective.

Q Why is that?

A Because it would probably constitute a source of

need for constant attention. It is small enough that in normal service one would have to take repeated checks, perhaps on a watch basis, or certainly on a daily basis, to see that it did not get overfilled.

Q Captain, assuming that the leak tank were filled to capacity, assume that the valves were open in this manifold into which lines 638 and 637 go into, and assuming the starboard double bottom overflow tank were pressed up,what, if anything, would happen to the oil in the leak tank?

A Well, as the leakage from the operating engines continue, they would continue to put fluid into this system, and the tank has a line,664 and 661, connected to it, 664 being a vent line issuing on deck, 661 being the collection line from the save-oil system; both appear by the drawing to be connected to the top of the tank which means that if additional fluid were to be put in through line 654, I guess it is, and I guess this is 667 that it joins into, the oil would back up through this line, 661, as well as 664, until it could find the lowest level of overflow.

Q Which would be where?

A Well, if lines 660, where these valves are indicated in the turbo oil filter catch basin were open, it would come out of there first.

Q Or if there were no valves there?

A If there were no valves,then clearly it would back up there freely.

Q Now I call your attention to the division between the starboard overflow double bottom light oil tank and the center overflow diesel oil tank, which was modified by the removal of a manhole cover.

Now, is that an item, is that modification an item for approval by the classification society which administers this vessel?

A In my view it would be.

Q Why is that?

A Because these two tanks were originally installed to service fuel systems of different grades, and consequently needed to be isolated.

When these tanks were used for common grade, then clearly this isolation was no longer necessary.

On the other hand, if they were to be returned to the original intended service, they should be modified and put back into this isolated status again.

And in either case, whether one is changing the isolation in one direction or another direction, it should be part of the classification record of the vessel.

Q And you would expect to find that in the records of the classification society?

A I would.

MR. JULIANO: Mr. Daly, would you stipulate that there is nothing in the ABS records which indicates such a modification?

MR. DALY: Well, I have given you complete access to the records. Frankly, this is testimony which has come up for the first time. I certainly would not want to stipulate it.

You had the records made available to you. I have examined the records, and if you can find anything in it that would support your position, I certainly couldn't oppose you. But I'm not going to stipulate it at this time.

MR. WAESCHE: I cannot say we did a thorough check of the records in the limited time available, but we saw no indication of modification.

MR. DALY: For the record --

MR. WAESCHE: It is hard to present negative evidence.

MR. DALY: For the record, if you had examined the ABS records, you would find that back in April of 1971 letters were sent by our firm to yours and ABS and pursuant to those letters, authorization was given to Captain Halboth to inspect the records, and I believe he did inspect them

at that time.

I believe the survey report so indicates.

MR. WAESCHE: Nonetheless, Mr. Daly, I take it you will not stipulate?

MR. DALY: That is what I said. I will not stipulate.

Are you renewing Mr. Juliano's exception at this point? I don't like a dispute in the pulpit.

MR. JULIANO: There is no dispute.

MR. WAESCHE: Your Honor, I will make the statement to the Court I do not see anything in the ABS record which indicated the owner of this ship notified ABS of any such modification.

MR. DALY: Would you stipulate that Mr. Foros Argyriadis, the naval architect, who has designed many, many ships from the keel up, has worked closely with ABS over the years, has had day-to-day experience as a practical naval architect down to the nuts and bolts, to the most intricate drawings, has stated that this modification -- he rejected my word "modification" when I used it in the question to him, and said something like this wouldn't be cleared with ABS; ABS is not interested in the particular type of oil a vessel is using, or how it gets from the tanks to the pumps.

I would like to proceed.

THE COURT: That is what the record already shows. Go ahead. Proceed with your cross-examination.

MR. DALY: Yes, your Honor.

RECROSS-EXAMINATION

BY MR. DALY:

Q Captain Maclean, you were asked to review Captain Halboth's report in light of certain questions I asked you yesterday, and Mr. Juliano asked you whether you found anything inhis report that was inconsistent with the two paragraphs I read on page 1 of the report; and you called attention to the ullages in the port and starboard diesel oil side tanks and noted that those ullages apparently indicated the level of oil in those tanks was below the overflow or discharge point.

Is that correct?

A Yes, that is what has just recently been developed.

Q Do you know when Mr. Halboth took those ullages?

A It seemed to me that those ullages were part of the information that he obtained on his first visit to the vessel and that must have been some time around the beginning of April, I would guess, of 1971.

Q In any event, it would be about at least two weeks

after the break-out of the fire?

A I gather that's about it.

Q Diesel oil is for all practical purposes, and like most fluids, incompressible, is that right?

A Relatively so, its bulkhead modulus is high.

Q However, it is subject to considerable change in volume according to temperature, is it not?

A Well, I think the co-efficient of thermal expansion is significant, but I would venture that it is not such as to make a first order change in volume.

Q You say first order - that is a very technical expression, but what does it mean, first order? Would you reduce that to a number, please, a percentage?

A I would think something of first order would be something in the neighborhood of 20% change in volume or more.

Q And anything below that would not be a change in the first order, is that correct?

A Well, it isn't that clearly cut, but if the change of volume is of the order of say 5% or so, that would certainly be a second order change of volume.

Q What was the temperature of the diesel when it was being bunkered into the Trade Daring?

A I'm not aware of that. I have not seen that

report.

Q What was the testimony that the diesel oil on those side tanks reached during the course of the fire?

MR. JULIANO: I'm going to object. I don't think this is proper recross.

MR. DALY: Oh, your Honor, I intend to establish that the level of bunkers at the time observed by Captain Halboth is absolutely no indication, absolutely no indication as to the level these bunkers reached in the course of bunkering, and I can do that--

THE COURT: Of course, I think that this is improper recross examination with respect to this witness who has already stated for the record that "I wasn't there, period."

How would he know what the temperature of the fuel oil was when it was bunkered?

MR. DALY: I want to bring out from the witness that his observation --

THE COURT: He is depending on Captain Halboth's report, that's all.

MR. DALY: Yes, your Honor, but as a matter of expert testimony, I want to develop that the level of bunkers at the time observed by Captain Halboth would have no relation to the level of bunkers at the time of bunkering

because in the course of the fire the temperature would undoubtedly have risen which would cause a considerable expansion of the fuel in the tanks running through the overflow lines, and then that after the cooling of the liquid, it would naturally shrink and contract so one would very well expect to find it below the level.

THE COURT: All right, Mr. Daly, but why don't you ask him those questions instead of asking him what the temperature was when it was bunkered.

He knows nothing about that.

MR. DALY: I was trying to lay a foundation --

THE COURT: That is not a foundation for it. That is the only trouble with it.

Does the fuel oil expand under heat?

Q Does the fuel oil expand after heating?

A Yes.

Q Do you have any feeling for what level the bunkers may have reached in the side tanks depicted on Exhibit 105 when the fuel oil was heated in the course of the fire?

A I have made no estimations of that.

Q Would it be in accordance with your understanding that if the oil had increased in volume as a result of heating, that after the temperature of the bunkers cooled,

that the bunkers would contract?

A That is correct.

THE COURT: Have you any estimate as to whether it would be a first order change under heat going in the other direction? Assuming your whole engine room was under fire. As I understand it, the whole engine room was on fire, is that not true?

THE WITNESS: That is what I understand.

THE COURT: Yes.

In other words, what I'm saying, would it be 20%, would it be 10%, 5%? What?

THE WITNESS: Well, the indication here is that the side oil tanks, the diesel oil side tanks have a rather limited boundary between the engine room bulkhead and the tank, and since there is the water outside this tank and since there is an empty cargo space presumably on the forward side of the tank, I'm not really too sure whether the heat being absorbed through this tank boundary into the fluid would not be almost totally negated by the heat induction outward toward the cold water, for instance.

I'm not aware of the draft, although I understand the draft was significant aft. I don't believe I have made particular note in my mind as to where the water level outside of this side oil tank might be, but in view of the

fact that the vessel was empty apparently and in ballasting condition, it probably had maybe in the order of 20 foot or more draft aft so certainly that would indicate a sizeable portion of the skin of the vessel was subjected to the cooling effect of any sea water that was there.

This was in January. It was pretty cold, I presume.

Excuse me. This was in March, so it was fairly cool, I presume. I think it would be very difficult without some very careful evaluation to estimate just what the rise in that temperature of that oil would be, and I'd be glad to make a trial guess at it, but I think it would be largely conjecture without more careful study.

Q I think we have had enough guessing and conjecture Doctor.

Would you be able to make any calculations based on these standard tables compiled by Saybolt indicating the co-efficents of expansion of various petroleum products to show what expansion the bunkers would have undergone in the course of the fire?

A Yes, I would certainly imagine you could make some; if you had some reliable assessment as to the temperature change, you could certainly make a similarly reliable assessment of the volumetric change.

Q Would I be correct in stating, then, Captain, and, Doctor, and I think this will be the last question I will have to ask you on this:

Would I be correct in stating that in preparing this diagram, Exhibit 105, absolutely no consideration was given to the temperature question either at the time of loading, at the time of the fire, or at the time when the ullages were taken?

A That is correct; there is no information on that.

Q In preparing that diagram-- we can forget about temperatures now-- in preparing that diagram, 105, did you take into account the concluding paragraph on page 4 of Captain Halboth's report, in which it is noted that"on subsequent attendances tank levels were noted to remain apparently constant except in way of port diesel oil side tank. The cause of leakage or loss could not be factually ascertained, although it was reported resultant fire induced damage in way of tank structurals or associated lines."

A Yes.

Q So you don't know to what extent the ullages, even as reported by Captain Halboth, might have been affected by structural damage to the tanks, do you?

A Well, the only thing that one knows is that the

starboard tank apparently retained its ullage over an extended period of time, while the port one did not. There is no indication that the starboard tank sustained the kinds of damages that the port tank did and clearly the starboard tank then would reflect a reasonably reliable assessment of the situation.

Additionally, the testimony by Mr. Bafalukos I believe it is indicated that the bunkering process was very nearly the same in these two tanks, that they rose at about the same rates, and were about at the same level when he last saw them, and certainly that was consistent with the ullage that was taken after the fire, and the indication that the starboard situation was stable..

Q Do you have Exhibit 54 there, Doctor?

A Yes, I have it here.

Q You referred to various lines, 641, 642 and 640.

A Yes.

Q What purpose did line 640 serve, that is, what function did it have?

A Let's see now, where did I see 640? This is 641. Is this the 640-- that is a 664, and this is 661. Where did I see 640? This is 640 here, I guess, coming out of the bottom of this drain, is that 640? Can you read that? It really isn't that clear.

Q It looks like 660 to me.

THE COURT: Do you have a magnifying glass?

THE WITNESS: I don't.

Q It is quite clear to me as 660.

THE COURT: I think 640 was down by the manual pump.

THE WITNESS: There is a 637, 635, 638. 640 is the discharge, that's right, 642 is the discharge, and 641 is the discharge; that is correct.

Q What function does line 641 serve?

A 641 serves to discharge the product from the hand pump over into the heating oil tank.

Q Ordinarily you wouldn't have that line open in normal operation, would you? I mean on a regular basis?

A No, I wouldn't.

Q What function does line 642 serve?

A Well, that appears to send the product of the hand pump back to the boiler. It goes off onto another drawing not indicated here.

Q And you wouldn't have that line open in normal operation, would you?

A No.

Q Except as an occasion might arise?

A That is correct.

Q And where does line 641 lead from and to?

A Well, the indication is that line 641 leads from the discharge of the hand pump and off to this heating side tank for the heating oil which is for the boilers, as I understand it.

Q And line 640?

A 640 goes off to an inspection funnel and presumably this is for a test purpose, to assess the quality of the product that is being discharged through the hand pump.

Q I believe you stated that the system as represented on that diagram you regarded as inefficient, is that correct?

A Yes.

Q The leakage tank and so forth?

A Yes.

Q Do you think that ABS and Germanischer Lloyd were ill-advised to approve that type of system?

A No.

Q I think you stated that it would require constant attendance, is that correct?

A Frequent.

Q If the line were left open from the leakage tank to communicate with the double bottom tank, would that require frequent attendance?

A No, but it would make the tank useless. If you had a continuous flow into that double bottom tank, why should you even have this tank there anyway? It costs money to put it in there.

Q Aren't there other functions that are served by that tank?

A Not if it is full.

Q Can that tank, that is, the leakage tank, be independently empty?

A Yes, it can. By two means: By the small sludge pump here, and also by this hand pump.

Q Assuming and going according to that diagram there were an overflow in the large gas-oil tank, where according to that diagram would the overflow go?

A This is the gas-oil side tank?

Q Yes.

A It would go -

Q The gas-oil, the main gas-oil tank.

A This is referred to here as the gas-oil side tank. This would discharge into, as overflow into the starboard overflow double bottom tank.

Q And that is the tank which has the line which reads "through the valve chest to the leakage tank"?

A Well, I don't think the line reads "through the

valve chest to the leakage point.

The indication is that the line reads "from the double bottom tank to the valve chest and from the leakage tank to the valve chest."

Q There is a communication, though, is there not, from the double bottom tank to the leakage tank?

A If the valves on the valve chest are not one-way valves, then there could be free communication.

MR. DALY: If you would bear with me just one moment, your Honor?

THE COURT: Yes.

(Pause)

MR. DALY: I have no further questions, your Honor.

MR. JULIANO: Thank you, Captain Maclean.

THE COURT: All right, Captain, you may step down.

(Witness excused)

MR. JULIANO: Captain Halboth.

H E N R Y C. H A L B O T H, called as a witness by the defendant, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. JULIANO:

Q Captain Halboth, what is your present occupation?

A I am presently self-employed as an independent marine surveyor.

Q Captain, how long have you been engaged in this work?

A I have been engaged as a marine surveyor between the years 1954 and 1964 and between the years 1969 and the present.

Q Would you briefly state your professional and educational background to the Court, please?

A I was graduated from the New York State Maritime Academy in the year 1944.

I subsequently served at sea in a licensed capacity aboard American Flag inspected merchant vessels between the years 1944 and 1950.

Between the years 1950 and 1954 I served on active duty in the United States Navy as a commissioned officer aboard oceangoing vessels and was further educated and trained by the United States Navy at regular schools in the disciplines of marine engineering, ship salvage, diving, and ocean engineering generally.

Between the years 1954 and 1964 I was employed

by the United States Salvage Association, Inc., New York, New York, as a marine surveyor.

Subsequent to an initial training period with that organization, I served as resident surveyor in full charge of their offices at Jacksonville, Florida, and Honolulu, at Hawaii, and subsequently on their executive office staff as a senior surveyor for salvage and towing.

Between the years 1964 and 1969 I returned to sea in the employ of Merritt-Chapman-Scott Corporation as a shipmaster and salvage master, and was engaged aboard their vessels,the Curb, Cable and Rescue, in both the capacities of master and salvage master, and during that period did engage in full charge of major salvage operations on the East, Gulf Coast of the United States and in Caribbean waters.

I was further fully in charge of the New York Salvage Station of that organization and responsible for the maintenance and upkeep of the vessels assigned to that station and the salvage equipment there stored.

Subsequent to my employment with Merritt-Chapman-Scott Corporation, that is, between the years 1969 and the present, I commenced my own business as an independent marine surveyor and am so presently engaged.

Q Thank you, Captain.

As part of your professional duties, did you conduct an inspection of the M/V Trade Daring following a fire which took place on March 18, 1971?

A Yes, I did.

Q At whose request were you engaged to perform this inspection?

A I was engaged by Messrs. Bigham Englar Jones & Houston on behalf of Mobil Oil Corp.

Q When did you first board the M/V Trade Daring?

A My first attendance to the vessel was on April 1, 1971.

Q Where was she lying at that time?

A She was at that time lying moored afloat at Bethlehem Steel Corp. Hoboken Yard, Hoboken, New Jersey.

Q Did you survey the M/V Trade Daring on subsequent dates?

A I subsequently attended aboard the vessel on April 27, 1971.

Q Were there any other parties on board the M/V Trade Daring during the time you were aboard?

A It is my best recollection that upon my first visit the master was on board and there were additional certain representatives of the owner present.

Q How about the second time?

A The second time I attended with a Captain Neal of Mobil Oil Corp. and it is my best recollection, sir, that there were no other attendances at that time.

Q What did you do on the occasions you were aboard the M/V Trade Daring?

A I made a general and detailed inspection of the engine room and the various systems therein contained, particularly with reference to those systems involved with the vessel's fueling and fuel storage.

Q Did you render a report in connection with this inspection?

A Yes, I did.

Q I show you Exhibit 61 and I ask you if that is your report.

A Yes, sir, that is my report.

Q You may feel free to use it if you want.

What did your inspection reveal with respect to the number and location of the various fuel tanks situated in the engine room?

A My inspection revealed there to be generally the following tankage:

The port and starboard diesel oil side tanks, the starboard side light oil or gas-oil side tank, the port and starboard diesel oil settling tanks, the port and

starboard diesel oil day tanks, and theport light oil or gas-oil day tank.

Q How about the overflow double bottoms?

A There were additionally three overflow double bottom tanks arranged below the engine room floor plates to receive black oil, diesel oil and gas oil or light oil.

Additionally, counselor, I neglected to indicate that there also is a black oil side tank installed, all of which tanks are enumerated in my report.

Q How many grades of oil were used aboard this vessel in the various tanks?

A Well, it would appear, sir, that the vessel was originally designed to accommodate three grades of oil. However, upon my attendance it was apparent and it was further reported that the diesel oil and gas oil or light oil systems had been combined and that the vessel simply carried at the present one grade of diesel oil.

Q Did you calculate the total capacity of the fuel oil system, the diesel oil system?

A Well, counsel, I calculated the capacity to the extent that I accepted the cubic footage enumerated in connection with the various tanks and converted that cubic footage to long tons.

Q What constant did you use in cubic footage?

A I used, to the best of my recollection, a constant of 41.5 cubic feet per ton as indicated in my report.

Q Why did you use 41.5?

A This was consistent with the characteristics of the fuel oil reported to me as having been delivered by Mobil Oil Corp.

Q What did your inspection reveal with respect to the origination of the fire?

A Well, it appeared, sir, that the fire had originated in the area of the port diesel engine-driven generator or the immediately adjacent electrically-powered circulating pump.

Q And where is this machinery situated below?

A Well, it is situated-- I beg your pardon, counselor would you repeat the question?

Q Where is this machinery situated below?

A It is situated below a platform or partial deck surrounding the gasoel or light oil day tanks and the main engine fuel oil filters.

Q How do the tanks receive fuel oil?

A Well, the tanks receive fuel oil via a bunkering line which enters the engine room to starboard of the center line and from thence branches into the various lines serving the respective tanks.

Q Did you note any valves in these lines?

A Yes, sir, I did.

Q Would you tell us what valves you noticed?

A Commencing at the bulkhead there was first a branch line with an unlabeled valve which I traced and found to service the starboard gasoel side tank or light oil side tank. Thereafter, there was a line block valve. Thence there was a branch line with further routings to service the port and starboard diesel oil side tanks, the port and starboard bunker tanks, and a lower level manifold and pumping system, the condition of which latter appurtenance was such that I could not determine the full intent of its installation.

Q I show you a photograph and I ask you if it is a fair and accurate representation of the main filling line, the main filling valve?

A Yes, sir, that is in consonance with my examination.

Q And that is Exhibit 13.

Could you point out to the Court the main filling valve?

A Yes, sir, it is this valve in the center of your photograph.

Q Will you label that "main"?

(Witness marked)

Q And where in relation --

MR. DALY: Is this the same photograph that has been previously marked as an exhibit, trial exhibit?

MR. JULIANO: That is correct.

MR. DALY: Will it be apparent that the markings that are placed on it now by the captain are different from whatever markings may have been put on before?

MR. JULIANO: I believe so, Mr. Daly. They are ingreen ink as you can well see. They have arrows indicating the flow, and I think you will agree there is a difference.

MR. DALY: And the captain is using--

MR. JULIANO: A black ink.

MR. DALY: I think the record should show that.

MR. JULIANO: Thank you very much.

Q Could you show us where the gas-oil valve is located in this photograph?

A I'm sorry, I see in the upper portion of the photograph a valve body which is in the area that I noted the gasoel side tank line to be taken off from, the valve wheel, and associated appurtenances are apparently cut ouf of the photograph.

Q Would you just label that gas-oil valve?

(Witness marked)

MR. JULIANO: Let the record reflect that Mr. Halboth is indicating that with the word gas-oil.

Thank you.

Q You have described how the port and starboard side tanks receive fuel.

Would you please tell us how the port and starboard settling tanks receive the fuel?

A Yes, sir. There was a branch line taken off the line servicing the port and starboard diesel oil side tanks which was further valved and served the settling tanks port and starboard.

Q Is there any other way for the port and starboard settling tanks to receive fuel oil?

A Counselor, it is my opinion that these tanks also were serviced via a fuel oil transfer system and associated pump. However, I would be careful to point out that the disarray in the engine room was such that I did not trace these lines out fully nor was I able to understand all of the labeling involved.

Q How many overflow tanks exist in the system?

A There were three overflow double bottom tanks, sir.

Q How were they designated?

A They were designated the heitzoel or black oil

overflow tank, the treiboel or diesel oil overflow tank, and the gasoel or light oil overflow tank.

Q Now, in connection with the center double bottom overflow tank, from which tank is that overflow tank subject to receive oil from?

A That tank was subject to receive oil from the various tanks included in the treiboel or diesel oil system; specifically the port and starboard diesel oil side tanks and the port and starboard diesel oil settling tanks.

Q Does that include the port and starboard day tanks?

A No, sir, that does not include the port and starboard day tanks which had overflow lines originally arranged to discharge to the port and starboard bunker tanks.

Q From which tanks is the starboard light oil overflow double bottom designed to receive oil?

A The starboard light oil overflow tank or gasoel overflow tank was intended to receive overflow from the starboard light oil side tank and from the port light oil day tanks.

Q How do bunkers flow from the various tanks to the overflow double bottoms?

A There was to be noted in way of each of the tanks that I have mentioned an overflow line from the upper portion of the respective tanks leading downward into the overflow

tanks of like fuel grade.

Q How could one sight an overflow?

A Well, there were installed on the lower level a series of bull's-eyes or sight glasses intended to visuall signal oil flowing through those lines.

Q I show you Trial Exhibit 4 and I ask you if that is a fair and accurate representation of one of the sight glasses that you have just described as existing in way of an overflow line?

A Yes, sir, it is.

THE COURT: What exhibit is that?

MR. JULIANO: This is Exhibit 4, your Honor.

Q Captain Halboth, standing in the area of the No. 3 generator, can one see the sight glass leading from the overflow line from theport diesel oil side tank?

A If I understand you correctly, counselor, you intend the No. 3 generator to be that generator immediately to port of the main engine at the main engine's forward end.

Q You understand me.

A And answering the question as phrased, a person standing in the vicinity of that generator could see the sight glass in the port diesel oil side tank overflow line.

Q At the same time, if a person were to look to the

starboard, could he see the starboard sight glass from the starboard overflow line on the starboard diesel oil side tank?

A Based upon my measurements on board and the diagram which I made, I do not believe that a person standing in a location so as to see the port overflow line actually overflowing, that he would be coincidentally in a position to also see an overflow in the starboard line. There is a measurement of 30 feet between the two bull's-eyes.

Q And the bull's-eyes, where do they face, how do they face?

A They face directly aft.

Q So that one would have to stand in front of the bull's-eye to see the oil flowing through.

A Reasonably so, yes, counselor.

Q What other piping systems did your inspection of the M/V Trade Daring reveal?

A As respects the fuel oil system, I observed vent lines and lines associated with a so-called save-oil system which had been installed to service various appurtenances in the fuel system.

Q Would you please describe the save-oil system that you found on your inspection?

A The system that I found consisted of a series or

group of drainage basins fronting or surrounding certain tankage or filtering appurtenances, which basins were in turn fitted with drain lines to carry the contents of these basins ultimately to the overflow double bottom tanks.

Q Did your inspection reveal any basins around the settling tanks?

A No, sir, it did not.

Q What was the purpose of the save-oil system?

A The save-oil system, as best I can describe it, is an intended efficiency means of saving for re-use overflow or spillage which may be occasioned in the area of the various appurtenances that this system serviced.

MR. DALY: Your Honor, I may be premature in my objection, but this witness was presented as a fact witness. I detect in the last question a tendency toward going into expert areas.

We have not had his direct testimony. Perhaps I'm being premature, but this question is definitely along the lines of an opinion.

THE COURT: It sounds like he's getting to be a hybrid.

We are going to take a short recess.

You may step down.

(Recess)

BY MR. JULIANO:

Q Where were the save-oil collection basins located in relation to the overflow connections at the various tanks.

A They were located at the lower portion of the tanks as opposed to the overflow lines being connected in the upper portion.

Q Now, in connection with the various valves that you found in your inspection, in what language were the valves labeled?

A They were labeled in German, sir.

Q I show you a diagram, which is Exhibit 62, and I ask you whether or not it is a fair and accurate schematic representation of the save-oil system together with the various tanks on board the M/V Trade Daring?

A Counselor, in my opinion it is an accurate representation of the manner in which the system works. There are some inaccuracies as regards connections and perhaps in specifics, but it is a fair representation of the means by which the system works.

MR. DALY: Your Honor, may I inquire for clarification by whom that exhibit was prepared?

THE COURT: Maybe you can get a stipulation.

MR. JULIANO: I thought it was clear that I had drawn this exhibit, your Honor.

MR. DALY: Under the direction of Captain Halboth.

MR. JULIANO: Not under the direction of Captain Halboth, no.

Q Based on your inspection, how did you observe the save-oil drain lines to lead to the respective overflow double bottoms?

A They led either directly to the overflow double bottoms in question or were connected into the vent lines leading from those overflow double bottoms.

Q What did your survey disclose in connection with the overflow piping for the port and starboard diesel oil day tanks, and I wish you would refer to Exhibit 62, please.

A The overflow lines from the port and starboard day tanks, which are numbered on this diagram Tanks 5 and 6, had been disconnected from their intended routing just above the save-oil basins fronting the respective day tanks so that any overflow from those day tanks, instead of proceeding through the intended routing to the settling tanks which are located immediately below the day tanks, such overflow would fall directly into the save-oil basins and give a visual and audible indication that these tanks were in fact overlowing.

Q And where were the collection basins on the port

jk:mg 96 Halboth-direct

and starboard day tanks located with respect to the basin under the central oil filters?

A They were at a more elevated level than the latter basin.

Q Now, are there any valves in the save-oil system piping fronting the day tanks port and starboard?

A Yes, sir, I observed a hand valve in way of each line coming from the save-oil basins in front of the port and starboard day tanks.

Q Would you indicate that for the Court, please, and would you label that valve, please?

THE WITNESS: Your Honor, there was a valve situated here and a valve situated here, which if manually closed would have prevented outflow from those respective basins.

THE COURT: I see.

Q Would you label that valve, please?

(Witness marked)

Q Now, did your inspection disclose any valves underneath the central oil filters or the port light oil day tank?

A No, there were no valves existent in way of those lines.

Q Captain, based on your inspection of various tanks

and save-oil systems, how could the save-oil basins located at the central oil filters and the port light oil day tank be overflowed?

MR. DALY: Objection, your Honor. I think that is calling for expert testimony.

I don't think the witness has been qualified as an expert in this field. And he was called as a fact witness.

THE COURT: Sustained.

MR. JULIANO: Thank you very much, Captain.

Your witness.

CROSS-EXAMIN. TION

BY MR. DALY:

Q Captain, what records, if any, did you examine or review in preparing for your testimony here today?

A In preparing for my testimony today, sir, I have reviewed my report and the notes contained in my file which I have brought with me.

Q What days were you in attendance on the Trade Daring?

A I believe I have testified that I was in attendance on board the Trade Daring on April 1, 1971 and April 27, 1971.

Q On your report, the one dated July 14, 1971, the

opening paragraph seems to state that you did on April 1, 2, 3, 13, 15, 21, 27 and June 23 survey without prejudice the Trade Daring.

Is that correct?

A I was not aboard the ship on all those dates, Counselor. However, your statement as to what the report says is correct.

Q So you actually were only on board two times, is that correct?

A That is correct, sir. These other dates are representative of consultations with principals and also as the report indicates further on, attendance aboard the Mobil Trader, which vessel was reported to me to have been involved in the bunkering operation.

Q But your report does read, does it not, that you did on those dates, the various dates, survey without prejudice the M/V Trade Daring, does it not?

A That is correct.

Q So that statement is actually incorrect?

A No, sir, it is not incorrect. I consider any activity in connection with that inspection to have been a survey of the vessel.

Q How many days did you spend in attendance on the Mobil Trader?

A One morning, sir.

Q How much time did you spend in attendance on the Mobil Trader?

You may refer to your notes from your file.

A To the best of my recollection it was in the order of four hours or thereabouts.

Q Do your notes indicate how long you spent on board the Mobil Trader?

A I'd be only too happy to check, sir, but I don't know that they do, offhand. No, sir, they do not specifically say how long I spent aboard the Mobil Trader.

Q Do the notes indicate who, if anyone, you spoke to on board the Mobil Trader?

A No, sir, they do not.

Q May I see Exhibit 62, the sketch?

MR. WAESCHE: Here, sir.

MR. DALY: Thank you.

Q Did you work with Mr. Juliano in preparing this sketch?

A No, sir, I did not.

Q On this sketch, Exhibit 62, you have added to the sketch certain valves, have you not?

MR. JULIANO: That is not correct, your Honor. The valves were indicated. All that Captain Halboth did was

indicate the word "valves" leading to those locations.

Q In your survey report, did you make any reference to the valves which are depicted on Trial Exhibit 62?

A I believe I do, sir.

Q Could you tell us where in the report you make mention of those valves?

A Yes, sir; if I may review the report, I shall be pleased to.

On page 4 of my report, under subheading "The Save-Oil System," the second paragraph thereunder reads, inpart:

"Hand valve closures were seen in way of the save-oil system high point collection basins fronting the port and starboard diesel oil day tanks (5 and 6),otherwise no valves of any description were evident."

Q That last portion you added, otherwise no valves of any description were evident, those words do not appear in your report?

A They do, sir, in the paragraph to which I referred. I repeat, I am reading from page 4, under subhead, "The Save-Oil System, Paragraph 2 --

Q I accept the correction, Captain.

Before coming here to testify, did you review the testimony of Commander Cronk of the United States Coast

Guard?

A I saw a diagram that he prepared, yes, sir.

Excuse me, sir, I misanswered. I did not in any way see his testimony. I saw portions of his original casualty report. I have no knowledge whatsoever of his testimony.

Q Did you review any ship's plans, the venting system, or the fuel oil transfer system before testifying today?

A I have seen plans, various plans, regarding the ship, sir. I have not studied them or reviewed them in detail. The only plan to which I have had any significant access is contained in my file here.

Q And what plan is that, sir?

A Here (indicating).

Q How would you characterize this plan; what would you call it, what type of plan is it?

A I would characterize it as the person who drew it characterized it as a ladeplan, l-a-d-e-p-l-a-n.

Q Does that correspond to capacity plan?

A My loose German translation would be loading plan, sir, which I guess is equivalent to capacity plan.

Q Did you prepare dny sketches in the course of your surveys on the Trade Daring?

A Yes, sir, I did. It is perhaps more proper to say that I prepared these sketches immediately after my attendance, so that my memory would be refreshed properly if necessary at a later date.

Q May I see those sketches, please?

A Yes. (Handing)

Q When did you prepare these sketches which you have just produced?

A Immediately after my attendance to the vessel, sir. I would say during the first week of April.

Q Do you have a sketch which shows the connection between the vent system and the save-oil piping?

A Yes, sir. You have passed it on several occasions there. There are two sketches actually. The one which you are presently looking at is strictly diagrammatic.

MR. JULIANO: Shouldn't this be identified for the record?

THE COURT: Yes.

Q These various papers, do they comprise the notes and sketches that you made in the course of your attendance onboard the Trade Daring?

A In part, yes, sir.

THE COURT: Can we identify the sketches or have them marked for identification.

MR. DALY: Yes, your Honor, I would, particular sketches.

Q I show you this sketch, which is one of those that you have handed me, and ask you did you prepare that sketch?

A Yes, sir, I did.

Q Is that one of the sketches you prepared shortly after being in attendance on the Trade Daring?

A Yes, sir, it is.

MR. DALY: I ask that this be marked as Exhibit 59, Trial Exhibit 59.

xx (Plaintiff's Exhibit 59 marked for identification)

THE COURT: What would you call it, Captain, a sketch of what?

THE WITNESS: It is labeled, your Honor, and is just what it is, a schematic diagram of the system, to the best of my recollection.

Counsel removed it before I had a chance to read the complete title.

THE COURT: Let him look at it.

THE WITNESS: It is labeled, sir,"M/V Trade Daring Schematic Diagram, Oil Tank Overflow Vent and Save-Oil System."

THE COURT: Are you offering it, Mr. Daly?

MR. DALY: I will just have it marked at this time, your Honor.

MR. WAESCHE: We offer it, your Honor.

MR. DALY: No objection.

THE COURT: All right. Received.

xx (Plaintiff's Exhibit 59 received in evidence)

Q Captain, in the course of your survey of the Trade Daring, did you note that the requisite vent lines to atmosphere above the main deck were fitted?

A I beg your pardon?

Q Did you notice that the vent lines, the requisite vent lines to the main deck were fitted?.

A Yes, sir.

Q How long were you aboard the Trade Daring on your first visit?

A On my first visit I was aboard the Trade Daring approximately between the hours of 9:00 a.m. and 3:30 p.m.

Q What was the condition of the vessel in and around the tank tops and the bilges in the engine room?

A There had understandably been a considerable amount of oil and water residue in that area which had been at the time in part pumped down making the area quite accessible.

Q Did you take the temperatures of the product in the various tanks that you examined or ullaged?

A No, sir, I did not.

Q Were there lights in the engine room at the time you inspected her on that first visit?

A The engine room was extremely well-illuminated through the skylight at that time. It is my best recollection that there were no electric lights available at the time.

Q Referring to Exhibit 13 on which you have made certain markings, you have a green arrow running down along the piping--

A I did not make those markings, counselor. I have no idea what they are.

Q You have no idea?

A Not the green markings, sir, I did not make them.

Q So you do not know in which direction the flow is involved here.

Is it in accordance with that green arrow, if you know?

A Assuming fuel to be entering the ship, yes, sir.

Q You did make a marking labled "Gas-Oil," did you not?

A Yes, sir, I did.

Q Do you know if that valve or the piping flowing from that line which you have marked "Gas-Oil," do you know if that communicates with this center line in which this arrow flowing down is indicated?

A Counselor, I made a diagram which you saw there specifically depicting that valve arrangement, the connections and valves associated with it, and it is in my notes there.

It is reasonably in consonance with that photograph as best as I can tell.

Q Well,now, would you answer my question?

Does this line marked "gasoel" communicate with this line flowing down, the one indicated by the green arrow?

A I cannot specifically tell from the photograph. To the best of my knowledge, it does.

Q When you went on the Mobil Trade, did you speak to any of the personnel at that time?

A On the Mobil Trader, sir?

Q Mobil Trader.

A Yes, I did.

That again is not correct, sir. I was on board the Mobil Trader while they were speaking. It was not my point to interrogate them nor to initiate conversations with

them.

Counsel, who was in attendance with me, undertook that sort of thing.

Q And did he do that in your presence?

A Yes, sir, in part.

Q Now, on the date of your second attendance on board the Trade Daring, as of that date, and I believe that was April 27, is that correct?

A That is correct.

Q -- had you discussed with counsel the testimony of the crew of the Trade Daring, that is, the master and officers and crew members that had been taken approximately a week prior to your second attendance?

A It is my best recollection, sir, that I did not. I went back on the second occasion primarily to accompany Captain Neal, who was unfamiliar with the ship, and who together with myself was going to make an examination as respects the origination of the fire.

Q Are you quite certain you did not discuss the testimony of the crew or officers before your second attendance on the Trade Daring, or is it that you have no clear recollection?

A Counsel, I will repeat --

MR. WAESCHE: That is, discuss it with counsel

for Mobil?

MR. DALY: That is correct.

A I can only repeat what I stated previously, counsel. It is my best recollection that I did not. This circumstance occurred four years previous to this testimony or thereabouts, and my recollection remains as my report is written primarily.

Q Your report was prepared, or at least dated on July 14, 1971.

Prior to preparing that report, had you discussed the testimony of the personnel of the Trade Daring with counsel for defendants?

A It again is my best recollection, sir, that I did not.

Q Do you hold any maritime engineering license?

A No, sir, I do not.

Q During your service with the Navy, you did have some training in damage control, fire control?

A Yes, sir. I also operated the steam plants of major vessels during the course of that time as an engineering watch officer.

Q Those were steam plants?

A Yes, sir.

Q Have you had any experience operating diesel

plants of major vessels?

A Operation, no. Maintenance and repair, yes, sir.

Q And what vessels were those?

A Vessels generally in the range of 1800 to 2400 horsepower, which may be inaccurately described as major, to be absolutely frank.

However, my primary experience with diesels has been in the range of 1800 to 2400 horsepower.

Q I guess by today's standards or 1971 standards they would be considered relatively small vessels, would they not?

A I think that is a reasonable statement, yes, sir.

Q Your training and experience has been largely as a salvage master in the salvage field since you actually gave up going to sea?

A No, sir, I would not say that is so. My major experience and training has been in the area of plain and simple marine surveying.

Q You were trained for deep sea diving, ocean salvage and so forth?

A That is correct, sir.

Q And you were what is called a salvage master?

A I was for a period of some three years, yes, sir.

Q You are not a graduate of the New York State --

I beg your pardon -- the United States Merchant Marine Academy at Kings Point, are you?

A No, sir, I'm not.

Q Was the vast bulk of your experience on board ships in the deck department?

A Yes, sir, that is correct.

Q Now, in between or during your visits or in conjunction with your visits to the Trade Daring and prior to the issuance of your report in July 1971, did you attend at the American Bureau of Shipping to examine records there?

A Yes, sir, I did.

Q And you were given authorization to do so by representatives of the plaintiff, is that correct?

A That is correct, sir, as best I know through Messrs. Bigham Englar Jones & Houston.

Q During the course of your attendance on the Trade Daring, you interviewed the master and other owner's representatives.

Do you recognize Mr. Doros Argyriadis sitting at counsel table with us?

A Yes, sir, I do.

Q Do you recall you saw him on board the Trade Daring?

A To the best of my recollection he or a gentleman

of similar appearance was in attendance during my first visit on the vessel.

I do not recall him being present on the second occasion.

Q How long were you on the vessel on the second occasion?

A On the second occasion I believe my attendance was relatively limited in the order of between 12:00 noon and approximately 3:00 p.m.

Q I note on page 6 of your report, under the heading, "Particulars of Examination Aboard Mobil Trader," that you describe various of the gear and pumps on board the Mobil Trader, both during -- and pressures both during pumping at full speed and during stripping and blowing out of lines.

Where did you get that information from?

A To the best of my recollection, this was reported to me by the operating personnel of the Mobil Trader.

Q You don't have any record of who those individuals were?

A Other than the pumpmen and the vessel's master who was in attendance, I have no other record, no, sir, as respects names or other witnesses.

Q Did they indicate that they were the same

individuals who were on board the Mobil Trader at the time of the fire?

A They did not specifically indicate that to me, no, sir.

Q Did you gather that impression that they were?

A It was my impression, yes, sir.

Q Do the names Captain Banks or pumpman Milano or deckman Beekman, do they refresh your recollection as to persons you interviewed or spoke to on the Mobil Trader?

A The name Banks strikes a chord and I certainly believe he was in attendance at the time. I don't associate the name with a particular capacity aboard the vessel, however.

The other two names do not strike a bell.

Q Returning to Exhibit 62, I note that the only vent line shown is a vent from the tank designated No. 13.

Was that the only vent line that you saw from any of the double bottom tanks or any of the other tanks that are depicted on this diagram?

A No, sir, that is not the only vent line.

Q As a matter of fact, there were vent lines from each of these tanks, were there not?

A Yes, there were.

Q While you were on board the Trade Daring during

your second visit on April 27, did Captain Neal more or less follow you around and you'd point out various things to him, would that be about the size of it?

A No, sir, I don't really think so. Captain Neal very diligently conducted an inspection of his own. As I recall the situation, we were there alone and it is not the type of situation that you would want to send somebody alone, so I endeavored to accommodate by going with him, and certainly I did help to speed his inspection, but I don't believe I influenced it.

Q Was it your testimony that the overflow piping from the diesel oil day tanks, both tanks port and starboard, that piping had been blanked off or disconnected in the course of its normal flow into the settling tanks?

A Yes, sir.

Q Have you ever read Captain Neal's report which he made as a result of the inspection on which he accompanied you? That has been marked Exhibit 57.

A No, sir, I have not.

Q These day tanks to which we were both just referring, they are filled from the settling tanks through the separator, is that correct? They are not filled directly from the outside?

A To the best of my knowledge, they are, Counselor.

I did not specifically trace that arrangement out.

Q As a matter of fact, I think you said the condition of the vessel was such and the difficulty in reading all the stampings and markings on the lines that you could not trace all of the lines to their source, is that correct?

A That is essentially correct, sir, and I did not have nor take the time to make that detailed an examination.

Q What was the size of the save-oil line which is indicated on this sketch 52 as apparently communicating with a vent line; what was the size of this line?

A I do not know, sir.

Q What was the size of the vent line?

A I do not know, sir.

Q Do you recall whether they were both of the same size?

A On an order of magnitude basis, the save-oil lines were smaller than the vent lines to the best of my recollection.

Q On an order of magnitude, would you put a number on that for us? What was the relative size of the vent line and the save-oil line?

A Well, it would be my best estimate that the overflow lines were in the order of 6 inches whereas the save-oil lines were in the order of 1-3/4 inches.

Q You are referring now to the overflow lines.

What about the vent line, what size was that?

A The vent line in the order of 4 inches. And I emphasize, Counselor, that these are orders of magnitude estimates based only on the vaguest of recollection. I did not measure nor did I make any notation regarding these sizes.

Q Was it your understanding of the save-oil system that with respect to the save-oil lines running from the port light oil day tank, the central oil filters, the port say tank and the starboard day tank, that these lines had no other communication into the double bottom overflow tanks other than through the vent line which is depicted on Exhibit 62 as communicating with the save-oil line I just described?

A No, sir, that is contrary to my previous testimony. I believe I testified that my examination indicated those save-oil lines to either go directly to the overflow double bottom tanks or to be connected into a vent line.

Q So in that sense, 62 is incorrect in the particulars I have just described?

A Yes, sir, I believe I indicated as much on direct examination.

Q Were you able to trace all of the save-oil lines

depicted on Exhibit 62 into the double bottom overflow tanks?

A Those that did not connect into the vent system, yes, sir.

Q You were able to trace all of those lines depicted as save-oil lines directly into the overflow double bottom tanks, you say other than those that went and communicated with the vent line?

A Yes, sir.

Q In the course of your survey, did you ever find any save-oil line leading into a leakage tank?

A No, sir, I did not.

Q Do you know what a leakage tank is?

A I presume it is in the order of a waste oil tank or a separate tank intended to take slops.

Q And did you see any leakage tank on the Trade Daring in the engine room?

A No, sir, I did not.

MR.DALY: If your Honor please.

(Pause)

Q Did you ever open up and look into the overflow tanks?

A No, sir, I did not, other than to open the sounding lines and get hit by the head of oil on them.

Q Did you ever go below the level of those tanks?

A ARe you asking me, sir, whether I went into the double bottom tanks?

Q Or went below the level of those tanks?

A I guess the most correct answer to your question is no, sir.

THE COURT: Mr. Daly, these pauses are getting longer and longer.

Now I'm a patient fellow but I'm not that patient.

MR. DALY: I am trying to save time, your Honor, by eliminating anything that I think might be duplicative.

THE COURT: Unfortunately, I don't think you are succeeding.

Let's move it.

MR. DALY: Well, I will have to try harder.

BY MR. DALY:

Q On page 5 of your report, I believe you state that the fire appears to have originated at the engine room lower level port side in the way of No. 3 generator.

Hvae you learned anything since making that report that would tend to cause you to correct that observation or conclusion?

A No, sir. I have heard nothing since that time, and

I would only amplify your statement to the effect that I in fact state in way of the No. 3 generator and/or electrically-powered circulating pump.

Q On page 1 of your report, under "Background Information" -- I won't read these last two paragraphs, but I'm sure you are familiar with those last two paragraphs under that heading, beginning at the words "At 0042 hours," and down to the final words of that secondparagraph, "catastrophic fire."

Have you learned anything since preparing that report to cause you to alter that background description you gave?

A No, sir. This background description was given to me in the mode and manner indicated on Paragraph 1 of that heading, and that is all there is to it. I have learned nothing since.

Q The purpose of your survey, according to the instructions you received, was to determine the cause of the fire, among other things.

A Well, I can only state, sir, that my understanding of the purpose of my attendance is as stated in the preamble, which is simply for the purpose of investigating relevant to the cause of engine room fire.

Q So anything relevant to the engine room fire fell

within the purpose for which you were sent on board, is that correct?

A I would say so, yes, sir.

Q On the last page of your report, page 8, I believe you suggest rerouting incoming oil to available space in way of the forward deep tanks 15 and 16 as one of the courses the ship's personnel might have taken when confronted with this overflow situation, is that correct?

A Yes, sir.

Q For what use or for what purpose are those forward deep tanks, what type of oil do they normally contain?

A Other than as indicated on this plan that I have, sir, I don't know.

Q What is indicated on the plan you have?

A The only indication on the plan that I have is that these respective tanks are deep tanks, port and starboard, and I might state that I'm loosely translating from the German, and there is no specific indication on this plan as best as I can tell at this moment which definitively assesses the type of oil which may be carried in those tanks.

Q And what type of oil would that be?

A It doesn't say.

Q Actually you don't know whether the tanks, the

forward deep tanks, would even receive or accept this diesel oil, do you?

A I have no doubt that they would accept it, sir. Whether there was a different grade of oil in there or not, I do not know. However, I would certainly rather contaminate the oil than burn my ship up, or pollute the harbor, or otherwise.

Q Do you know if there are appropriate connections in the engine room for rerouting oil from the double bottom tanks to the forward deep tanks?

A My diagram shows a connection to the forward deep tanks at the bunkering station.

Q At the bunkering station?

A I do not. I say reroute the oil, sir, not to pump the double bottoms to the forward deep tanks.

Q When you say "reroute the oil," you are referring to rerouting it from the deck level?

A That is right, sir.

Q Now, Captain, referring to page 7 of your report, under the heading, "Bunkering Considerations," this sentence appears:

"Bunkers aboard Trade Daring on arrival at Perth Amboy, New Jersey, have been variously reported at 165 tons per custom declaration and subsequently as 200 long tons per

crew testimony."

Does that refresh your recollection as to whether at the time of the issuance of your report you had the benefit of advice as to what the crew of the Trade Daring had testified?

A It refreshes my memory to the effect that I was undoubtedly told that. I did not read the crew testimony, as I previously testified, nor did I review it.

Q But had you been advised of the crew testimony?

A If I say so here that I was advised that there had been 200 long tons per crew testimony, that is what I was advised of, sir.

Q Is this the only thing you were advised about concerning what the crew had testified?

A Again, to the best of my recollection, it is as stated in my report.

Q Well, that report doesn't state that that was the only thing you were advised.

Do you know whether you were advised generally as to what the crew had said in their testimony which has been taken, I believe, on April 17 through 19 of 1971?

A I was not advised generally as to the crew's testimony, sir.

Q Now, on page 8 of your report, in Paragraph B,

which begins at the top of the page, you state:

"Should these hatchways have been left open or only partially secured during the fire as appears entirely possible, the ingress of water would here also serve to decrease ullages and perhaps induce overflow to the double bottoms."

A That is correct, sir.

Q Do you know whether those hatchways were left open?

A No, sir, I do not.

THE COURT: I've got to cut you off at this time, Mr. Daly. I hope--

MR. DALY: I do have one further question, then I will be through with my cross, your Honor.

THE COURT: All right, one further question.

Q Did you examine at any time the firefighting capabilities of the vessel, that is, the various fixed or portable systems it may have had?

A Again, Counselor, it is my best recollection that I did observe these appurtenances. I don't believe I have any specific note or did I include anything in my report concerning it.

Q You didn't see anything worth reporting, is that correct, with respect to the firefighting systems?

A I don't think that I considered my reporting on this to be relevant.

MR. DALY: I have no further quations.

THE COURT: All right, we will be in recess until 9:30 tomorrow.

(Adjourned to 9:30 a.m., July 2, 1975.)

jk:mg 123 252

Navieros Oceanikos, S.A., owner of the Liberian Vessel, Trade Daring,

Plaintiff,

v.

Werker

S. T. Mobil Trader, her engines, boilers, etc., Mobil Oil Corp., the owner of the Mobil Trader and Mobil Sales & Supply Corp., 72 Civ. 1225

Defendants,

v.

Trade & Transport, Inc.

July 2, 1975
9:30 a.m.

(Trial resumed)

H E N R Y C. H A L B O T H, resumed;

MR. WAESCHE: Your Honor, we do at this time have two fact witnesses in the courtroom.

I call that to the attention of Mr. Daly if he wants them excluded.

MR. DALY: May I just ask one question, your Honor?

It came to my attention, someone mentioned that Captain Halboth was in the courtroom while Dr. Maclean was

testifying. I thought we had excluded fact witnesses.

It is only important in one respect: Certain questions I asked about the pipelines.

MR. WAESCHE: I don't know whether he was or not.

Were you in the courtroom when Captain --

THE WITNESS: I appeared at the appointed hour of two o'clock and I was seated in the gallery at that time.

MR. DALY: Well, your Honor, not having the complet record of what Dr. Maclean said and what Captain Halboth heard, I would like,when the record is prepared,to make appropriate comment, at least with respect as to those matters that Captain Halboth appeared to hear from two o'clock on.

THE COURT: All right.

MR. DALY: Thank you, your Honor.

MR. WAESCHE: Mr. Daly, do you wish the two fact witnesses here to be excluded?

MR. DALY: I thought the rule had been invoked as to fact witnesses, and I would only ask that one be excluded while the other is testifying.

MR. WAESCHE: It is all right if they remain now?

MR. DALY: No problem now.

MR. WAESCHE: All right.

REDIRECT EXAMINATION

BY MR. JULIANO:

Q Captain Halboth, I call your attention to your report, Trial Exhibit 61, to the paragraph on the first page, commencing at 0042 hours on March 18, 1971.

Would you look at your report, please?

Could you please tell us where you got the information from to write that paragraph?

A The information upon which that paragraph is based was received as indicated in the first paragraph under subheading "Background Information" from the vessel's master the owner's representative, and from such fleeting glimpses of the vessel's logbook as I have had.

Q May I see your sketches, please?

MR.JULIANO: May we mark this for identification as Exhibit 106.

xx (Defendant's Exhibit 106 marked for identification)

Q Captain Halboth, could you tell us what 106 for identification is?

A Yes, sir. There are two sketches contained on this sheet, the uppermost of which is entitled "Arrangement in way of day tanks at forward end of engine room."

These day tanks, by way of explanation, are the

diesel oil day tanks.

The diagram indicates roughly the arrangement of the overflow line, showing its disconnection, as I previously testified, and the section of the save-oil drain to the vent line passing that tank.

The lower sketch on this sheet is entitled "Arrang ment in way of heavy oil overflow line," and shows an arrang ment in way of that piping above the overflow tank which includes two valves and a waste oil funnel installed in that line.

MR. JULIANO: I offer that into evidence.

MR. DALY: I object, your Honor. This is an exhibit that could have been and should have been marked and submitted prior to commencement of trial as all other exhibits were.

MR. JULIANO: I submit, your Honor, Mr. Daly opened the door on this yesterday when he inquired about notes. I think it is relevant.

MR. DALY: There is no matter of opening the door. I think a completely different position was taken when the door had been opened with Mr. Argyriadis to introduce a plan of a vessel which he said was in conformity with what he said the modern practice was.

MR. JULIANO: Well, I noticed Mr. Daly raised

no objection when he marked one of the diagrams for identification, then offered it into evidence.

I think he set a precedent.

THE COURT: I will receive it in evidence.

MR. DALY: May I examine it first?

xx (Defendant's Exhibit 106 received in evidence)

MR. JULIANO: Your Honor, maybe to save -- sorry.

(Pause)

MR. JULIANO: Will you mark this for identification, please.

xx (Defendant's Exhibit 107 marked for identification)

Q Will you briefly tell us what 107 is, please, for identification?

A Yes, sir. Sketch 107 is entitled -- I'm sorry, sir, Exhibit 107 is entitled "Arrangement in way of light oil day tank" and is a sketch which I made immediately subsequent to my attendance to the vessel, depicting the save-oil trough in way of the light oil day tank showing its drain line as connected to adjacent piping, and also showing two water drains discharging to that save-oil basin with the respective hand valve closures attached thereto.

MR. JULIANO: Offered into evidence.

MR. DALY: Same objection.

THE COURT: All right, it may be received.

(Defendant's Exhibit 107 received in evidence)

THE COURT: How many of these have you got?

MR. JULIANO: Only one more, your Honor.

(Defendant's Exhibit 108 marked for identification)

Q Briefly tell us what 106 is.

A Exhibit 106 is a diagram of the lower engine room level arrangement of sight glasses, save-oil drains and sounding tubes in their relative locations as respects one to the other, and their overall location as respects the generator and main engine.

MR. JULIANO: I offer this into evidence.

(Defendant's Exhibit 109 marked for identification)

MR. DALY: Same objection.

THE COURT: Same ruling. It may be received.

(Defendant's Exhibit 108 received in evidence)

Q Finally, Captain Halboth, would you briefly describe Exhibit 109 for identification?

A Yes, sir. Exhibit 109 depicts the fuel piping arrangement as it enters the forward end of the engine room and is essentially a diagram which I believe to be compatible

to a photograph which was showed to me yesterday.

I have indicated the various valves schematically and provided a key.

Again, I would invite the attention of interested parties to the fact that I have translated the labels on these valves liberally.

In any instance where I was unable to translate the valve to my satisfaction, I indicated the actual German labeling on the valve. In other words, this diagram does not infer that the valves were labeled inconsistently with my previous testimony. They were all labeled in German.

MR.JULIANO: I offer that into evidence.

MR. DALY: Same objection.

THE COURT: It may be received.

xx (Defendant's Exhibit 109 received in evidence)

MR. JULIANO: I have no further questions, your Honor.

THE COURT: Mr. Daly.

RECROSS-EXAMINATION

BY MR. DALY:

Q Captain Halboth, on how many of the occasions listed in the preamble to your report did you consult with Mr. Juliano?

MR. JULIANO: I object to that, your Honor.

It is improper recross.

MR. DALY: Your Honor, Mr. Juliano went into the question of how he obtained his information contained in these paragraphs beginning at 0042 hours.

I think I'm entitled to explore what other sources of information he may have had.

THE COURT: I don't think so, Mr. Daly. I'm going to sustain it.

Q On Exhibit 59, you have a diagram which indicates a vent line coming from the oil overflow tank, and turning at a right angle to the right under the oil tank on upper level.

At what point did that line turn in that direction

A I have no idea, sir; as I testified yesterday, this--

MR. JULIANO: Mr. Halboth, I want to raise an objection.

Your Honor, that exhibit was identified yesterday on cross-examination. Once again, I raise the same objection.

MR. DALY: I'm tying it in with the other exhibit used today, your Honor.

THE COURT: All right, I will let him answer.

Overruled.

A As I testified yesterday, sir, this is a schematic diagram which I originally drew for the guidance of counsel during the course of my initial visits to the vessel.

It happens to be similar to the arrangement earlier depicted in my drawings relative to the diesel oil day tanks which have been entered this morning.

I have no idea where these relative turns were, sir, if in fact they did exist.

Q If in fact they did exist.

At what level did the save-oil drain connect to the vent line as you have it indicated on this sketch, 59?

A In reference to what, sir?

Q Well, we are talking about the engine room; at what level in the engine room did the save-oil line connect with the vent line?

A Below the diesel oil day tank save-oil drain so that it would flow by gravity.

Q Where was that with respect to the operating level of the engine room; was it above it?

A I have no factual recollection, sir. I believe it was above the operating level of the engine room.

Q And you saw the vent line clearly connecting with a save-oil line at that point above the operating level of the engine room, is that correct?

A If I so depicted it, sir, I traced those lines out and found them in that way on board the vessel.

Q Well, I think you said that this was schematic. That would mean you did not so depict it in any --

A I have another sketch there, sir, specifically in way of the day tanks which was traced out.

Q Would you identify the sketch you are referring to

A I have already done so, sir.

Q And what sketch is that, 106?

A Exhibit 106.

Q That was one of the exhibits marked this morning?

A That is correct, sir.

Q And at what point above the operating level of the engine room did the vent line, as you have depicted here connect with the save-oil line?

A Counselor, I am not an expert.

Would you explain to me your definition of operating level of the engine room?

Q What would you call the lowest level of the engine room?

A The lower level.

Q How far was this above the lower level?

A Considerably, sir.

Q Approximately how many feet?

A I would estimate, again on an order of magnitude basis, somewhere on the order of 12 feet.

Q 12 feet?

A Again, I did not specifically measure it, nor do I figure that that estimate of distance would serve any purpose in any calculations whatsoever.

Q But it is your recollection that it was on the order of magnitude of about 12 feet above the lower platform?

A That is correct, isr.

Q I believe you said that one of those sketches was a sketch you prepared for the assistance of counsel while you were in the course of your survey, is that correct?

A That is correct, sir.

Q I show you this Plaintiff's Exhibit 11 and ask you if you have seen that before.

A Yes, sir, I believe I have. It looks familiar.

Q Do you recall where you saw it for the first time?

A No, sir, I do not.

Q Do you recall in whose presence, if anyone's, you were when you first saw that?

A Specifically no, sir.

Q Genrally?

A I presume the only place I have seen any diagrams

related to this is in the conference room at the offices of Messrs. Bigham Englar Jones & Houston, which is heaped to the ceiling with diagrams, drawings and sundry other information.

Q Do you recall approximately when you saw this for the first time, that is, was it several years ago or onl recently?

A I believe it has been recently, sir. It was not several years ago.

Q Captain, in reviewing your report as bearing on the testimony you just gave with reference to these sketches I note that on page 4 of the report you describe the save-oil system.

Do you have a copy of your report with you?

A Yes, sir, I do.

Q Would you refer to page 4, please, under the paragraph, the Save-Oil System, and the last sentence in the first paragraph thereof, "Such enclosure is fitted with a drain which is situated below the vent atmospheric outlets and the overflow line connections at the various tanks. These drains are commonly piped, port and starboard, to the double bottom overflow tanks."

Do you make any reference or mention to connection with the vent line at that point?

MR. JULIANO: Your Honor, which diagram is Mr. Daly referring to now in connection with that last question?

MR. DALY: I have asked the question generally.

MR. JULIANO: Then I object to the question being asked generally as being improper recross-examination.

MR. DALY: I can appreciate your objection.

THE COURT: I will sustain that objection.

Q Do you see any mention in that sentence of connection with the vent system?

MR. JULIANO: Objection.

THE COURT: The same question, the same ruling.

MR. DALY: I believe, your Honor, the basis of Mr. Juliano's objection was with reference to a diagram.

MR.JULIANO: I object to that statement.

THE COURT: I've made the ruling.

Q Anywhere in your report, Captain Halboth, do you see any mention made of the connection between the vent line and the save-oil drain such as you depicted on sketch 106 which was introduced for the first time this morning?

A I would have to read the report, sir.

Q How many times have you read that report before testifying today?

A To be absolutely honest, sir, I have not read it

at all completely.

Am I to understand that I'm to read the report now, sir?

Q Well, if you can answer the question without reading it, fine. If not, perhaps the Court --

A I cannot sir. I again invite your attention and the Court's attention to the fact that I prepared this report over four years ago or approximately four years ago.

I have not made a detailed study in preparation for this trial in any way, shape or manner. I am here to testify and to offer my report, and that is all.

MR. DALY: Would your Honor care for the witness to read the report to see if there is such reference?

THE COURT: No.

Q I show you this photograph, Trial Exhibit 4, and ask you if you can tell us what that represents.

MR. JULIANO: May I see the photograph, please?

THE COURT: Let him tell us what it represents first, if he knows.

Q Do you know?

A I believe, sir, if it is the same photograph, I testified regarding this yesterday and it is a sight glass connected in what appears to be an overflow line or similar appurtenance.

Q And where are those sight glasses located with reference to the lower level of the engine room?

A It is my best recollection that for the most part, sir, they were located along the forward bulkhead, even though I believe there were sight glasses located elsewhere in the engine room.

Q Now my question is, with respect to the lower level of the engine room, where were these located?

A My answer remains exactly the same, sir. They were generally along the forward bulkhead, although there were other sight glasses in the engine room contiguous with the lower level.

Q How high was the sight glass, approximately, above the lower level?

A Approximately eye height, sir.

Q Do you recognize the piping indicated by the blue markings?

A I prepared a diagram which I believe went into evidence this morning which depicts piping similar to that going down alongside the sight glasses which I indicated on that diagram, and based upon that diagram, I would presume that to be a save-oil system line.

Q And this save-oil system line is running past a sight glass, the sight glass being located about eye height

above the lower level of the engine room, is that correct?

A That is correct, sir, and consistent with my previous testimony I indicated that some of the save-oil drains were connected into the vent system, and that others were not.

That was entered in my testimony yesterday.

Q So the sentence that appears in your report, which I read before, "These drains are commonly piped port and starboard to the double bottom overflow tanks" is not correct?

MR. JULIANO: Objection, your Honor.

THE COURT: What is the objection?

MR. JULIANO: It is improper recross.

MR. DALY: It hurts.

THE COURT: You can answer it, if you can.

THE WITNESS: Your Honor, it depends on one's definition of the word "commonly." The word "commonly" is there used to indicate that all of these lines are ultimately piped to the double bottoms, and I see no inconsistency with that statement.

All save-oil drain lines ultimately go to the double bottom regardless of what the routing might be, and that is my definition of the word "commonly," sir. I don't know what else can be read into it. Perhaps anything can.

MR. DALY: I don't believe I have any more questions, your Honor, but I would like to consult with my associates.

(Pause.)

MR. DALY: I have no further questions.

THE COURT: All right.

MR. JULIANO: Thank you, Captain Halboth.

(Witness excused)

P H I L L I P N E A L, called as a witness by the defendants, being first duly sworn, testified as follows:

MR. JULIANO; Your Honor, Captain Neal is our fire expert, and I just want four questions of introduction.

DIRECT EXAMINATION

BY MR. JULIANO:

Q By whom are you employed?

A By the Mobil Oil Corp.

Q How long have you been so employed by Mobil?

A Thirty-two years.

Q In what capacity are you presently employed?

A I'm a marine safety adviser.

Q And is this your resume which is Exhibit 99A?

A Yes, it is.

MR. JULIANO: No further questions.

THE COURT: All right.

CROSS-EXAMINATION

BY MR. DALY:

Q What maritime school training have you had, if any, Captain?

A I went to the Officers Candidate School in New London, Connecticut.

I attended two private upgrading schools in New York.

Q Are you a graduate of any merchant marine academy?

A No, I am not.

Q You are not a naval architect, are you?

A No, I am not.

Q You are the marine safety adviser for Mobil.

Does that include all branches of safety or only fire safety?

A Fire and safety.

Q Fire and safety.

Does that include such things as shipboard health and preventing slipping on board ship and proper handling of machinery, et cetera?

A The safety part of it includes some of those, not the health.

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Q Approximately how much of your time is spent on the fire aspect of your position?

A Oh, it is a good important part. Fire on tankers is very important. I would estimate 60%.

Q You were during your service with Mobil in the deck department rather than the engineering department, is that so?

A That is correct.

Q And you last sailed about 18 years ago?

A Oh, no. I spent half my time at sea.

Q When did you last sail?

A April 1975.

Q As an officer on board ship?

A No, as a marine safety adviser.

Q When did you last sail, though, as a member of the crew or officer of any vessel?

A I was master of the Mobil Apex in April 1969.

Q Were you ever in the engine room of a tanker when a fire suddenly broke out in the engine room?

A In my experience I have fought two engine room fires. I was not there at the time of the start of the fire, but shortly thereafter.

Q You have never been in an engine room when an engine room fire broke out in the engine room?

A Not when it broke out, no.

Q You hold a Coast Guard license for Master of vessels unlimited?

A That is correct. Since 1951, ocean master unlimited.

Q An engine room fire on a tanker which has just completed discharging a cargo of combustible oils and is in fact in the process of ballasting and is not gas-free, that presents one of the most dangerous situations for a seaman in the business, isn't that so?

A No, that is not quite correct.

If you are referring to the cargo on the Trade Daring, her cargo was No. 6 fuel, which is a relatively safe and innocuous cargo and gives off very few vapors during the ballasting process.

Q You went on board the Trade Daring in April of 1971, did you?

A Yes, I did.

Q Do you recall the date you went on board?

A Well, I only recall it from reading now. My memory isn't that good. But it was evidently April 27th.

Q How did you come to go on board, that is, who instructed you to go on board?

A Well, at that time I worked for Herbie Stein, and

the Office of the Marine Counsel had approached him, whether I should go aboard or not, because it is not my normal function to investigate outside ships, accidents on ships that don't belong to Mobil.

After considerable discussion, Herbie Stein told me I should do it.

Q After considerable discussion about the facts of the case as far as they were known at that time?

A Oh, no, just the principle of whether my duties should be extended to investigate an outside ship.

Q In any vent, you did go on board.

What specifically were your instructions, if any, with reference to your investigation?

A The broad instructions were to see what I could find out about the fire on the Trade Daring.

Q And you went on board as a fire expert, I assume?

A Yes, I was.

Q What time did you go on board?

A I think it was in the middle of the afternoon, or the afternoon.

Q How long did you remain on board?

A Oh, three or four hours.

Q And you were in the company of Captain Halboth during most of that time?

A Yes, I was.

Q Did he more or less give you a guided tour of the ship based on what he had seen previously?

A Well, no. His interest and mine were a little bit divergent. I wanted to be independent and I wanted to look more at the firefighting capabilities than I did at the causes of damage probably.

Q You only made one visit yourself, though?

A That is correct.

Q After your visit on board, did you prepare a report?

A I handwrote a report of the investigation.

Q Do you have that handwritten report with you?

A No, I do not.

Q Do you know where it is now?

A No, I do not.

Q Have you made any attempt within the past three or four weeks to find it?

A No.

Q Did anyone ask you to make an attempt to find it?

A No.

Q Did there come a time after you were on board that you reported the results of your investigation to someone?

A Yes. I brought this handwritten report to Tad

White.

Q You gave it to him?

A No, I did not give it to him. I brought it to him and for some reason he didn't want it, so we discussed verbally my estimation of the causes of fire and the conduct of the crew and the firefighting capabilities of the vessel, and he would not at that time accept that report.

Q But he discussed it with you at length, is that correct?

A That is correct.

Q What date was it that you had this discussion with Mr. White?

A I don't know, but it was soon after, maybe a week or four or three days.

Q That is the same Mr. White, Thacher White, who was testifying earlier in this case?

A That is right.

Q Did there come a time when you had your handwritten notes typed up into a typewritten report?

A No, I just saw this typed-up version of my notes, which is the same notes. I only saw this, oh, a short while ago.

Q Who gave you that typewritten report?

A Tad White did.

Q When did you receive that from him?

A It's been the last week or two weeks.

Q Well, he must have typed that up from your rough notes, is that correct?

A Somebody did. I don't know who.

Q Who did you give your rough notes to after you had discussed the matter with Mr. White?

A I don't know. He wouldn't take the written notes from me.

Q What did you do with them, with the notes, after you discussed it with Mr. White?

A As you know, the rule is "no expenses without a written report." I might have given them to Herbie Stein. I really don't know what became of them. But Tad White would not take them from me.

Q When is the last time you saw those handwritten notes?

A Years ago.

Q You were not on board to conduct an engineering survey of the damage, were you?

A Only-- no, not to assess the engineering extent of the damage. I was there for the cause of the damage and probable site of the fire, the ignition source, the fuel source, and so forth.

Q That report that you saw just recently, the report that apparently was typed up for you, did that follow your notes pretty well as you recollect it?

A Yes, it did.

Q Does that report have your signature on it?

A Yes, it does.

Q Did you sign that report?

A When I received it just now I signed it.

Q In other words, you only signed that during the past couple of weeks or so?

A Yes.

Q Did you conclude as a result of your investigation that the fire probably started in the forward port corner of the engine room where a diesel-driven generator was located; is that one of your conclusions?

A Yes, I did.

Q You made that judgment on the basis of the fire patterns around that area?

A That is correct.

Q I'm referring now to your direct testimony.

Do you have a copy of that?

A Yes, I do.

Q On page 1, Question 4, you state that you traced out the various fuel and venting lines in the engine room

to determine the cause of the fire.

In the course of tracing those venting lines, did you ever come to a point where any of the venting lines was connected with a save-oil line?

A Yes, one of the save-oil lines - don't ask me which one-- but one of the save-oil lines was connected to a vent line.

Q And at what particular point above or any other point with reference to the lower level of the platform was the connection between the vent line and the save-oil line?

A Well, it was surely below the trough of the save-oil system and it was surely above the double bottom, but otherwise I could not identify exactly where.

Q As a safety expert and particularly a fire expert, you would be very much concerned with the safety features or lack of safety features involved in a vessel's venting system, would you not?

A Yes, I would.

Q Did you mention anywhere in your report, if you know, any connection between the venting line and the save-oil line?

A I think I do. I'm not sure.

Q It is a rather brief report; if you would like

to just refresh yourself, perhaps you could point it out.

A No, only in a general way.

Q Other than the report that was just identified by you, your report to Thacher White, the one that was marked Exhibit 56, did you make any other written report?

A No.

Q I believe you stated in your testimony on page 2, question 5, that you examined blueprints of the Trade Daring and you identified several of them.

A Well, the first numbers refer to fire and safety plans, which every vessel is required to have, and the second one I also examined a general arrangement drawing.

Q Did you examine the vent plans? Did anyone show you the vent plans of the vessel?

A Yes, I examined Exhibit 34.

Q Yes, Exhibit 34.

A I examined it casually.

Q When did you see that for the first time?

A About a week or two ago.

Q You don't make any mention of that particular plan in your tesimony, do you?

A No.

Q On page 3, in answer to question 9, you state an opinion that the fire protection equipment on the Trade

Daring did not meet with accepted marine fire protection practice in the industry.

And you state further that your conclusion is based upon applicable rules of classification societies.

What particular rules of the classification societies did you have in mind?

A Well, my main thing was SOLAS 60.

Q SOLAS 60; that is not a classification society, is it?

A No, it is not.

I also read the ABS slightly. I'm not an engineering type. And I read the Germanischer Lloyd, but I want to say something about these two standards.

We build Liberian ships in Germany--

THE COURT: You are volunteering. I don't believe you can say it.

He has answered the question.

Q The question, Captain, is what particular rules of the classification societies did you have reference to in that testimony?

A The ABS and Germanischer Lloyd.

Q My question was, what particular rules? Do you have any rule numbers that you can point us to?

A At the time I researched them or looked at them, I

put the numbers down.

Q Do you know what those numbers are?

A No, I don't.

Q Captain, as you may know, we have received from counsel for your company in this action exhibits showing extracts of rules of various classification societies and so forth.

Have you prepared any similar extracts of rules to show us, that is, the rules that you say were violated by the fire equipment system on the Trade Daring?

A No, except that I pointed out to counsel, I have not, no.

Q Are you aware of the fact that the vessel, the Trade Daring, was in class with the ABS from the time she was built to the present day and at the time of the fire on March 18, 1971, she was fully in class?

A I have seen this come out here, yes.

Q You have seen it come out here, yes.

And have you examined the records of the American Bureau of Shipping?

A No,I have not.

Q In answer to question 11 on page 3, you state that the emergency generator diesel engine and foam system pump controls were located too close to he hazard which

they are designed to protect.

Is that your testimony?

A Yes, it is.

Q Where was the emergency diesel generator located?

A Between accommodation and after pumproom.

Q It was on the main deck level, was it not?

A That is correct.

Q And it was outside the engine casing, was it not?

A Closely outside, yes.

Q Closely outside?

A Yes.

Q But outside?

A Yes. Most emergency generator rooms and foam rooms are much more remote from the engine room than that.

Q It was actually above the engine room and forward of the engine room on the main deck level, was it not?

A I would agree to forward of the engine room.

Q And above the engine room. It was on the main deck level, is that correct?

A No, the engine room goes from the bottom of the ship to the fidley deck,the skylights.

Q It was outside of what they call the engine casings was it not?

A Yes, it was outside and adjacent.

Q And you were able to determine the location of the emergency diesel generator room from your observations durin your survey of the Trade Daring, is that true?

A No, I got that from the plan.

Q Did you go into that room when you were on board the vessel?

A No, I did not.

Q It was accessible, was it not?

A Yes, I guess so. I don't know.

Q Well, there were personnel on board the vessel to ask questions of, were there not?

A No, just myself and Captain Halboth.

Q There were no representatives of the owner aboard while you were making your inspection?

A No.

Q In the course of your survey in April 1971, you are certainly very much concerned as a firefighting expert to look at the fire extinguishing system.

You didn't make any criticism of the location of the diesel generator in your report to Mr. White, did you?

A No.

Q I believe in the course of your survey you saw evidence in the engine room that the fire had been fought with hand extinguishers and water lines, did you not?

A That is correct.

Q As I read your report, and correct me if I am wrong, Captain, the only criticism of the firefighting equipment as such, as I read your report, was that you thought generally a CO_2 flooding system, carbon dioxide flooding system, was required, is that correct?

A That is correct.

Q That is basically the only criticism you had of the system, at that time, isn't it?

A Yes.

Q Now you state on page of your testimony that the 1960 Safety of Life at Sea Convention, I guess we can call that SOLAS, states the emergency source of power aboard ships should be so located as to insure the functioning in the event of failure to main electrical installation.

Where was that stated in SOLAS? Do you have a reference to that?

A Well, I'd have to review the book.

Q Does this book look familiar to you? It is called "International Conference on Safety of Life at Sea, 1960."

A Yes, it does.

Q Do you think you can pick out that particular rule in that book?

Is that Regulation 26?

A Well, as pointed out, Regulation 26 says:

"In cargo ships (which means tankers) there shall be a self-contained emergency source of power, located to the satisfaction of the Administration above the uppermost contiguous deck and outside the machinery casings, to insure its functioning in the event of fire or other casualty causing failure to the main electrical installation."

Q Was this generator located on the uppermost contiguous deck?

A Yes, it was.

Q Was it located outside the engine room casings?

A Yes, it was, but it surely did not function at the time of loss of electrical power.

Q Actually, once there is compliance with the strict terms of Regulation 26, the particular location is a matter of judgment, is it not?

A Well --

Q Isn't that what it says, to the satisfaction of the association?

A If you mean, yes, these are minimum regulations. I have never seen an emergency generator room in such a location, of the fifty or sixty ships that I have inspected.

Q Does ABS act as the SOLAS representative in

performing inspection and surveys on board vessels?

A Yes.

Q I show you this report, Report No. BR5969, dated Bremen, Germany, March 1, 1971; one of the documents furnished by the American Bureau of Shipping following the appearance of a representative of ABS in court, and ask you if you recognize this type of report which I am handing to you.

This is a report consisting of two pages, and unde the covering letter of ABS, dated July 1, 1975.

Do you recognize, in a general way, at least, the report that is attached?

A Yes.

Q Does that report make specific reference to Regulation 26 that I was questioning you about earlier?

A Yes, indeed it does, it says Regulation 26, the first item.

Q And it seems to indicate compliance with that regulation, does it not?

A It just states that emergency diesel generator outside of engine room at forward end of the aft accommodation on the main deck, which provided emergency lighting, general alarm, and navigation lights.

Q And that report is dated March 1, 1971, is that

correct?

A Yes, it is.

Q In other words, about two or three weeks before the fire?

A That is correct.

MR. DALY: Your Honor, this particular document is a part of Exhibit 42.

THE COURT: All right.

Q Is Regulation 26 in SOLAS, is that part of the chapter or regulation governing the construction of vessels, if you know?

A Yes, it is.

Q It is?

A In the fire rules.

Q When did the Safety of Life at Sea, 1960, when did it actually enter into effect?

A At the time the government, having jurisdiction, voted to accept it. Different countries, different times.

Q Was that generally in effect in about May 1965?

A I don't really know what time the Germans accepted it or what time the Liberians accepted it.

Q It must have been some time after 1960, I would assume?

A Yes.

MR. JULIANO: I object. Argumentative.

Q Were those construction regulations intended to apply, according to the language of SOLAS, were they intended to apply to existing ships or only ships that were constructed or keels laid after the SOLAS came into force?

A Well, generally regulations, and I would say specifically these, they grandfather design and construction; they don't grandfather operations and furnishings.

Q But construction is grandfathered?

A Yes, it is.

Q So that the construction rules apply to existing ships or rather to ships that will be built and not to existing ships, is that your general understanding?

A That is correct.

Q On page 5 I believe you mention a criticism that the emergency diesel was not capable of starting automatically.

I note that you have not cited any reference for that, I mean, you have not invited our attention to any particular rule.

Is that required in any rule?

A Well, I couldn't find it, I'm sorry to say, but I will say most, indeed all of Mobil's vessels automatically

start when the main generators fail, the emergency generator starts.

What if you are navigating or something like that, you need steering fear, you need --

Q Captain, I believe we can benefit by your experience, but I would prefer that you answer my question directly.

And the answer, I take it, is that you are not aware of any rule that requires automatically starting generators, is that correct?

A That is correct.

Q Going to page 6 of your testimony, you state that at the time of the fire only 15 drums of foam compound was immediately available for use in the engine room foam fire-fighting system.

This amount would provide only 1600 square feet of foam, 6 inches in depth, whereas the bilge area below the engine room floor plates was about 4000 square feet.

How did you measure or calculate the 4000 square feet of bilge area below the engine room floor plates?

A I took it that it was 60 feet x 70 feet.

Q In other words, a rectangle 60 x 70; you say you took it to be. Did you take those measurements from any particular plan?

A I scaled them off a general arrangement plan approximation.

Q And you had a rectangle 60 feet x 70 feet?

A Well, it is not rectangular, but the stern curves in, so it is roughly rectangular.

Q Do you have notations of those calculations with you?

A No, not with me.

Q Did you actually do those calculations yourself or did someone else do them and you looked them over.

A No, I did them.

Q You took this 60 x 70. Did you deduct from that area the area occupied by the large main engines?

A No, I did not. The rule states only that you should use the area, greatest area subject to fire exposure, which to me would mean the whole top of the double bottom.

Q But a considerable portion of that area is blocked off by having the main engines resting on it, isn't that so?

A Well, the supports of the main engine rest on the double bottom. I don't think the whole main engine does.

Q You didn't make these calculations while you were on the Trade Daring in April 1971, did you?

A No, I did not know the foam quantity on board at

that time.

THE COURT: Are you telling me that there is an area space below the main engines?

THE WITNESS: There well might be. I don't know.

Q You say there well might be. Do you know if there is?

A No, I don't know.

Q Aren't there other units also in that area that are firmly on the deck which would serve to diminish or reduce the total amount of floor space?

A Yes, but I don't think the rule reads that way. They should surely consider the whole area.

Q Now, these 15 drums of foam compound, you said that this amount, in effect, was not sufficient.

What size drums were these?

A I took them to be five-gallon drums.

Q Five-gallon drums. And what did you take to be the expansion ratio of the foam-- what mixture?

A The foam-water mixture probably expanded eight times.

Q Eight times. And normally what percent solution would be required, that is, how much compound would you add to make up a total of water and compound of 100 gallons?

A European foam is 6% foam, 6% foam concentrate

with 94% water, 1 to 17 roughly speaking.

Q What capacity did this foam consist of to generate foam, that is, what rate would it generate foam?

A It would generate foam at the water, the water rate through the adductor would be the foam generation rate of the system.

Q Yes, and what was that designed rate for the system on the Trade Daring?

A I don't know.

Q Was it 5000 liters per minute?

A You are talking about solution rate?

Q I'm talking about the foam.

A Froth rate. I don't know.

Q How many liters would be necessary, how many liters of foam would be necessary -- let's take your maximum figure of 4000 square feet, how many liters of foam would be necessary to provide a blanket of foam 6 inches over that area?

A Liters I'm not too good in. But 4000 feet, half a foot thick, would be 20.000, 2000 cubic feet of froth.

Q How many liters would that represent?

A I don't know. There is about 7-1/2 gallons to a cubic foot.

Q Captain, pointing to another part of our

Exhibit 42, a series of reports under the letterhead of American Bureau of Shipping, dated, on a letter dated June 30, 1975, I invite your attention to page 11 of one of these reports.

It is the report BR5970, dated or indicating the last visit of the vessel March 1971. And I ask you if you can tell us whether this report makes reference to the fixed froth foam installation, Regulation 70?

A It does.

Q It does?

A Regulation 60.

Q You are right. Regulation 60.

And under Question 199 on the following page 12 (a), "Is the quantity of froth foam available sufficient to cover this area to a depth of 6 inches (15 centimeters) according to calculation?"

That is on the printed form.

On the right-hand margin there appears to be typewritten "Yes."

Is that correct?

A Yes, but I don't know what quantity of foam is referred to.

Q Apparently it indicates it complied with the SOLAS Regulation 60, does it not?

A Yes, but part of my judgment is based on the fact that our vessels have 120 drums of foam aboard.

Q Well, you read in the testimony, did you not, the testimony of the crew, that in addition to the drums, these five-gallon drums, which you say were five-gallon drums in the pumproom, there were additional drums forward on the same deck in the chief officer's stores; did you read that in the testimony?

A Yes, I did, but it does not qualify as being readily available.

Q Well, how many of these five-gallon drums would you empty into the system at one time?

A One at a time.

Q One at a time. How long would it take to empty it?

A 20 seconds.

Q Don't you think in a period of about five minutes some eager seaman could run over a few feet, go to the chief officer's stores, and bring back more drums, if necessary?

A Well, perhaps he could. Five gallons of foam weigh 50 pounds.

Q I'm sorry, I did not hear you.

A I say five gallons of foam weigh 50 pounds. It

is hard to run with.

Q Are you familiar with the Mini-Max foam system that they apparently had on the Trade Daring?

A Yes, I know it, roughly speaking.

Q Is it a familiar system to you?

A It is a European system, German system.

Q And isn't the Mini-Max foam system still used in many engine rooms on motor vessels today?

A Yes, it is.

Q In any event, Captain, we are probably engaging inan academic exercise, are we not, because as you read the testimony, in spite of the availability or non-availability of the foam compound, the engineer who made an attempt to dash to this foam room was cut off by the fire because it had spread so rapidly and gushed, flamed upward even into the accommodation spaces; you are familiar with that situation, are you not?

A Well, I know that the foam and generator room was unaccessible to him at the time he needed it.

Q On page 6, you refer to a 4-inch fire main.

Where did you derive that information that the fire main was 4 inches?

A It is so labeled on the fire and safety plan.

Q Was that 4 inches or was it in centimeters?

A No, it was 4 inches.

Q And you suggest there was a requirement in SOLAS that would apply to this vessel constructed in 1955 which would require a fire main of more than 4 inches?

A Well, this is quite long and involved, but fire mains and fire pumps are balanced out in the SOLAS statement; in other words, if you had a tremendously high pressure pump, I guess theoretically you could have a 3 inch fire line.

Q In any event, as you saw from the certificates, apparently the SOLAS representative, namely, American Bureau of Shipping, on or about March 1971, seemed to approve the system, is that correct?

A That is correct.

Q After its inspecting and examining it, you could not argue with that, could you?

A Well, the vessel was evidently in class. We heard testimony to that.

Q On page 7 you refer to Exhibit 89,in which you say, "In addition to other deficiencies, the vessel violated certain additional fire safety standards found in the U.S. Coast Guard rules and regulations for tank vessels."

What does that rule say, Captain, and in what respect does it violate it?

A Well, it is spelled out here,"tankers propelled by an internal combustion engine,only carbon dioxide fire extinguishing systems shall be installed."

Q Shall be installed.

Do these Coast Guard regulations apply in that respect, as far as construction is concerned, to a foreign built vessel?

A No.

Q No, they do not, do they?

A No.

Q As a matter of fact, those regulations didn't apply even to American built vessels prior to 1969, did they?

A Oh, the effective date of that, I would hazard a guess, at least-- they are old, quite old regulations; diesel engines are classically protected by a carbon dioxide system.

Q The particular regulation you were referring to was in the Code of Federal Regulations, Title 46, and what regulation number was that?

A It is here given Section 34.05-5(7).

Q Do you have the regulation with you?

A No, I don't.

Q Is that the same regulation I am showing you now?

I don't have your full regulation, Captain, in front of me because Exhibit 89 furnished by counsel only contains an extract of the regulation, but is that apparentl the same regulation I'm pointing to now, 34.05-5?

A You've got to get -5 and (7) on the end of it.

Q Let's go down to 7, Internal Combustion Installations.

A Yes.

"If a fire extinguishing system is installed to protect an internal combustion installation the system shall be of the carbon dioxide type."

Q That says "shall be installed"; is that correct?

A If it is installed.

Q That looks to the future, does it not?

A No, "shall" denotes will.

Q I direct your attention to subparagraph 3 of that, that reads: "On vessels of 1000 gross tons and over, the consturction conversion or automation of which is contracted for on or after January 1, 1968, a fixed carbon dioxide system shall be installed."

Is that correct?

A That is correct. But I'm no lawyer and the first one says if you install it, it will be carbon dioxide. That one says you shall install carbon dioxide. That is

the only difference.

Q Are there any other gases that are commonly used instead of carbon dioxide to fight fires on board ship?

A Not commonly used, no.

Q Have you ever heard of the Haelon system?

A Yes, indeed, I have.

Q Is that a new system?

A That's a new system.

Q Do you have that on any of your Socony Mobil tankers?

A No, we have investigated that system, and so far have not used it. We have not used it.

Q It is not used.

Doesn't it have many advantages over the carbon dioxide system?

A It has advantages and disadvantages.

Q That is like most systems, you have pluses and minuses.

Now, isn't one of the disadvantages of a Co_2 system the fact that you have to immediately before you activate the system, you have to desert the spaces that are going to be flooded in order to avoid asphyxiation of the personnel?

A CO_2 is an asphyxiant.

Q And you have to immediately remove the personnel before activating the system, isn't that so?

A Yes.

Q Which means that in case of a fire, a small fire, you can't take time to fight it; if you are going to use the CO_2 system you have to get those people out of there in a hurry before you activate the system, is that correct?

A Yes, if you fail to fight the fire with hand extinguishers, you make a judgment --

Q You have to make a judgment at the time?

A Yes.

Q It is one of those things you make on the spot?

A Yes.

Q And if you have made a judgment on the spot you wouldn't want a Monday-morning quarterback years later saying, "Well you zigged instead of zagged"; would you?

A No, I wouldn't.

In this case the engine room was untenable in any case.

Q The engine room was untenable in any case, but they apparently did make some attempt to fight it with the hand extinguishers and the lines you saw in the engine room, is that correct?

A Well, I don't know if the crew did that or the

subsequent firefighters.

Q I think that in your testimony you mentioned that the engine room fire or typical engine room fire is a three-dimensional fire, is that so?

A Diesel engine room fires is typically three-dimensional.

Q I think we have discussed some of the disadvantages of CO_2, namely, you have to get the personnel out before you can activate the system, and that might give the fire a certain headway which it wouldn't get if you were going to fight it with the extinguishers available at the time.

Is that a fair analysis of the situation?

A Yes.

Q Now, once the fire reaches the accommodation spaces on the main deck, CO_2 wouldn't have any effect, would it?

A The CO_2 would only be effective if the engine, that is the only place it is led to.

Q And if the skylights are blown off in the engine room, the CO_2 will become heated and go out with it, wouldn't it?

A Well, that is a conjecture. CO_2 itself is quite cold.

Q Yes, but as soon as it gets into a blazing engine

room it is going to heat up in a hurry, isn't it?

A Well, I could say with the same strength that the engine room cools down in a hurry, too.

Q Now, normally air contains what percent of oxygen?

A Approximately 20%.

Q And how much oxygen would you need at a minimum to support combusion?

A 15%.

Q So if you have any sizeable openings in the spaces that you are trying to protect with CO_2 the CO_2 is not going to be very effective, is it?

A Well, depends onthe locatio of the openings. CO_2 is heavier than air.

Q Yes, but like most gases, it expands and lightens relatively when it is heated?

A Yes.

THE COURT: We will take a recess at this time.

(Recess)

THE COURT: You are still under oath, Captain.

THE WITNESS: Thank you.

BY MR. DALY:

Q On page 8 of your direct testimony, and continuing over to page 9, you state that you have various

* * *

both the port and starboard day tanks, is that correct?

A Yes.

Q And you saw one of those pipes on the starboard side apparently what, disconnected?

A No. It led into the trough, if my memory serves; they had to cut the lip of the trough to get the pipe in.

Q But the overflow pipe on the port side was all right, wasn't it?

A I don't know. I don't mention that now and I can't remember.

Q You did not mention it in your report, did you?

A No.

Q In your testimony specifically you state various things that you think the crew should have done.

I think you indicate that the first step upon noting the fuel going through the sight glasses or overflow lines was to cut off the flow of bunkers into the vessel, is that right?

A That is correct.

Q And isn't that what both engineers, Spetsiotis and Engineer Bafalukos, attempted to do?

A No. Bafalukos ran on deck to communicate with the barge or do something and he ran right by the valve that wouldhave stopped the flow.

Q Didn't he go up to the deck - and you read his testimony - to find out if the pumpman was still pumpting, found he was, and he and the captain ordered the pumpman to stop?

A Well, I can't evaluate his deposition that close.

Q I'm not asking you to evaluate it, but you have criticized one aspect of the firefighting operation, and I'm asking you if they did not testify that they did just what you suggested they should do, try to cut off the flow of bunkers into the ship?

A My point is he ran by the valve that would have done it.

Q And Mr. Spetsiotis did at the same time go to the valve, and do you recall reading his testimony that he closed the central valve even if it burst; do you remember reading that?

A I recall that he closed it, but the sequence, the time, the intervals involved, I'm a little confused about.

Q You are a little confused on those?

A The time between when Bafalukos ran on deck and the second engineer closed that valve; I have no idea of the relationship.

Q When the crew members saw the oil spilling onto the generator, they attempted to do two things almost

simultaneously, according to their testimony.

First they tried to cover the generator and then they tried to de-energize the generator to cool it, as a source of ignition.

Was that the right thing to do before the fire started, to try to keep the oil away from the source of ignition?

A Yes. There are better ways of doing it, but that was a good objective.

Q On the spot, that is what you might very well do yourself, isn't it?

A Well, it is a poor way to contain oil with a tarpaulin -- I will say that. Shutting off the generator wouldn't mean that it would cool off . It would still be hot for several minutes afterwards.

Q That was a reasonable step to take, though, wasn't it?

A No, I don't think so.

Q When the oil in and about the generator virtually, as it is described, exploded with a poof, I think is the word used, they immediately attempted to fight the fire with the hand extinguishers, apparently those that you saw lying around on your inspection.

Was that the right thing to try to do,to immediately

try to conctain the fire, nip it in the bud?

A If it was at the bud stage, yes.

Q And the next thing they attempted to do was to reach the foam room and activate the foam system.

Was that the right thing to do?

A No, they should have stopped the flow of oil. That should have been their main consideration.

Q Well, we will assume that they had stopped the flow of oil before they attempted to activate the foam system, if that was the true sequence; was activating the foam system then the right thing to do?

A No. Alarm the crew. The first precept in fire-fighting is give a guy a chance to live, alarm everybody; then fight the fire with the means at your disposal. That is classic.

Q Didn't they send someone up to alert the crew?

A Well, perhaps they did, but that isn't what you asked me.

Q Were there any personal injuries or deaths resulting from this fire?

A No, there were not, as far as I know.

Q They were very fortunate, weren't they, a fire of this kind?

A Yes, you should not leave such things to fortune.

Q One of the next steps they took, that is, the second and third engineers, they tried to starve the fire of oxygen by closing the skylights and portholes.

Isn't that a reasonable thing to do?

A That is reasonable, but there was a tremendous amount of air readily available in the engine room at the time. That was reasonable, but fairly futile immediately.

Q But it is one of the things that all the manuals on firefighting suggest, isn't it, try to close the openings, starve the fire of its oxygen?

A Yes. But not under these conditions it wasn't the most effective method. You had to burn up all the air in that engine room, which would be a long, lengthy process.

Q I believe you mentioned in your testimony that, and I'm reading from page 9, that there was only one fire drill since leaving Europe.

Is that right?

A Yes, that is what it says.

Q Do you know when they had left Europe?

A Offhand I don't know now, no.

Q Well, apparently they were in Bremen, according to that SOLAS certificate I showed you before, on or about March 1, 1971. I presume it would be some time during that

interval, March 1 to March 18.

Would one fire drill during that period, would that be normal?

A Well, they departed from Europe several times in the preceding months.

Q You have spent time in training crews to fight fires, is that correct?

A That is correct.

Q I mean crews of vessels.

A Yes, sir.

Q Have you published any reports or writings in the field? I notice that you are a member of various protection societies. Have you published any writings or memoranda in the field of firefighting?

A Yes. I participated in a movie, Firefighting Aboard Tankers, before the International Safety Conference. I presented papers, safe loading practices on tankers. I presented a paper before the Means Section of the National Safety Council, Modern Firefighting Trends or something like that.

MR. JULIANO: I didn't get the last answer.

THE WITNESS: Modern Firefighting Trends or Recent Trends in Firefighting. Something like that.

Q Now, one theory of training men for fighting fires

on board a ship is that each man should be trained to handle every possible firefighting job so that he becomes kind of a jack-of-all-trades.

Are you familiar with that theory of training?

A Yes.

Q Do you agree with that theory?

A Within the limits of the man's capability-- there's all degrees of crews -- he should be taught to handle anything that he can intelligently use.

Q There is another theory that says that broad type of training places too much burden on a man, on an individual, that is, the individual you are likely to come across in the seafaring trade, and that he should be taught specifically his job, to do it instinctively so that when an emergency arises, he can do it almost as a matter of reflex.

That is another theory of training, is it not?

A Well, that is one of the minor considerations, yes.

THE COURT: Are the two mutually exclusive?

THE WITNESS: Sometimes yes. I wouldn't want an Indian pulling the CO_2 controls at the wrong time or for the wrong compartment, --

Q You mean you wouldn't want the Indian, you'd want

the chief or someone who is trained like the chief?

A American crews should understand because often officers are dead and not available on American ships, so a civilized, sophisticated crew, everybody should understand as much as they can all about fire protection.

Q In any event, the man who went to activate the foam system, Mr. Spetsiotis, you read his testimony, he seemed to know what he was doing, didn't he? He was able to describe the room, its fittings, the location, he seemed to know what he was doing?

MR. JULIANO: I will object.

Q Isn't that so, from his testimony?

MR. JULIANO: It is argumentative.

THE COURT: Sustained.

Q One of the criticisms you make, Captain, is that you thought that the ship's personnel should have pressurized the fire lines through the ship-shore universal fire connector.

What is a ship-shore universal fire connector?

A Well, on page 185 of SOLAS it is described, and it enables ships all over the world with different fire connections, it enables them to be standardized at this connecting device. It is a $12 device and compared to the benefit of that device in saving a ship, it should surely

have been on board, and would enable them to connect up to the Hess' fire main system and even though their own ship was without power, they would have had water pressure on their own fire system.

Q Were there any professional firefighters at any time on board the Trade Daring when the vessel was at the Hess terminal where she caught fire?

A I read in the papers, second or third-hand knowledge, but I don't know for sure.

Q What type of firefighting brigade or system does Hess have at the terminal, if you know?

A I don't know definitely. I have ideas, but I shouldn't really speak about it.

Q As a matter of fact, as you read the testimony, wasn't the immediate feeling of anyone and everyone on board the vessel, including pilots, people on the Mobil Trader, the people on the tugs next to the Trade Daring, was to get the Trade Daring out, away from this very dangerous shore installation?

A I can't speak to their feelings. It was a grave decision to take a dead ship away from any source of help. That was a grave decision. Somebody made it, indeed they did.

Q Also away from a source of much destruction if the

fire communicated to the shore facilities, is that correct?

A Well, that is correct; within limits. It depends upon the probability of the fire spreading beyond the engine room which in my view was very small.

Q Are you familiar with the Hess dock and waterfront regulations?

A Not in a definite sense. In a general sense, yes.

Q All of the regulations for almost all of these oil companies with shore installations would be pretty much the same, is that what you mean, when you say you are familiar with them in a general sense?

A Well, there is a book called International Oil Tanker Terminal Safety Guide, and that book is widely accepted and it discusses this problem of whether to tow a fire-burdened ship away from a jetty or to keep it there and fight the fire with the shore facilities provided.

It is a long involved problem. I don't think you can discuss it.

Q Don't all of these regulations that you refer to that the oil companies have say the first thing that should be done is get the vessel ready, get rid of the lines,so it can be moved away?

A No, indeed. They say consider the following facts: To turn a vessel loose, he could float across the channel

and set fire to five other vessels, he could float to the middle of Perth Amboy. It is a grave decision to make.

Q It is a very grave decision to make and really the only man who can intelligently make it is the man on the spot at the time, isn't that so?

A Yes.

Q You mentioned the vessel possibly drifting across the channel and doing damage elsewhere, and that would be certainly a grave consideration.

But if you had tugboats alongside so that the vessel would not drift away, that might be a factor which would say,"All right, let's move it away from the terminal"; isn't that so?

A Yes. This is a very complicated question, and I think we could talk all day here and not --

Q Even professional firefighters could have a good discussion on that subject, couldn't they, without coming to any firm conclusion?

A That is correct.

Q You also mention the abandonment of the vessel by the crew was foreclosing fighting the fire because the shore-based firefighters might be left ignorant of the ship's layout.

But actually you don't know what shore firefighters

were available at the scene at that time?

A As to numbers --

Q Numbers?

A No, I know some came down.

Q Ordinarily, should the master be a fairly knowledgeable person to keep on board, to be able to advise people of the strangers to the ship of the layout of the ship?

A Yes, the master should be one of them.

Q You also mention in your testimony that there was the possibility of late-starting up the foam system.

Do you have any indication or is that merely speculation that there was a time when the fire had subsided to the point where the foam system could be activated?

A This mostly refers to the fact that the foam system was cut off by wind, by smoke, and lack of lights in the middle of the night.

However, if someone had stayed aboard, the vessel had changed its attitude in relation to the wind, lights might have been provided, and they could have restarted the emergency generator which would have been a big help and restarted the foam system which would have been some help.

Q Do you think the foam system would have been a big help with this three dimensional fire blazing?

A No, maybe by that time it was not three dimensional, maybe it was all in the bilges by that time.

Q Did you read the Coast Guard investigative officer's report concerning his investigation of this fire?

A No, I did not.

Q Did this fire, as you understand the testimony, appear to be a flash fire?

A Well, it surely should have been an accelerated fire, yes.

Q In your report you state that there are forward bunker tanks that could be used for bunkers.

I believe that is on page 1 of your report.

Are these forward bunker tanks in fact incorporated into the fuel oil system of the vessel?

A They are incorporated in the fuel oil bunker system as the general run of things as shown by the plan, yes.

Q Do you know what operations would be necessary, assuming you were loading side bunker tanks and you wanted to then load or direct the bunkers to the forward tanks, do you know what operations would have to be performed in order to accomplish that?

A Well, I can guess. You would shut off the bunkers going aft and shut off one valve going aft and open

one valve going forward.

Q Would you have to go forward to open the valves at the forward end of the ship?

A Depends if the filling lines had valves on them.

Q At page 2 of your report, you state that the overflow lines from the day tanks lead into overflow double bottom tanks.

Was that so?

A The overflow lines from the gas oil day tank went by 635 line to the double bottom.

Q By which line?

A 635.

Q Line 635. Do you have that line 635 in your notes?

A No. I saw it on the plan.

Q Have you written that down somewhere?

A No.

Q Did someone point that line number out to you?

A No.

Q Would this be correct:that you and Mr. Halboth went through the engine room, you were there several hours, you were looking for the cause of the fire, and you were looking into all of the circumstances surrounding the fire, and what criticism you did have of any of the piping or venting or other system is indicated in your report, any at a

A Yes, indeed. I'd like to lay this at rest and talk a lot about this. An engine room, because it is full of ignition possibilities, the fuel load in an engine room of free oil is kept to a minimum, and to actually design or construct a system whereby free oil is available as a fuel, as a fire fuel, to me is not standard.

Q Well, Captain, I was directing you to your report. Well, I guess your report speaks for itself. I don't want to continue this at any great length.

On page 2 of your report, you do speculate, and I think that is your word, that as the side tanks become filled, the overflow would be diverted to other settling tanks or day tanks.

Was that your understanding that from the side tanks you could directly go to the day tanks?

A That was my understanding, my estimation, yes.

Q Do you know otherwise now, that before you could get into the day tanks you would have to activate a pump drawing from the settling tanks?

A I heard Mr. Argyriadis say so, he had a pump.

Q Have you ever read Mr. Halboth's report, his survery report?

A No.

Q On page 3 of your report you refer to various

options, I think you call it a poor option, that the engineers were faced with when they noted the overflow, and as the final option, you state, and I quote from the next-to-last paragraph:

"He also had the option of stopping the transfer from the barge."

From your reading of the testimony, didn't it appear, at least according to the testimony, that that option had been exercised by the engineer who was on the deck of the Trade Daring?

Didn't he order the barge to stop pumping?

A Well, I'm not prepared to evaluate all those depositions. I didn't specifically look at that.

MR. DALY: I believe I'm finished, your Honor.

I would like to consult for one moment.

THE COURT: All right.

(Pause)

MR. DALY: I have no further questions, your Honor.

THE COURT: All right.

REDIRECT EXAMINATION

BY MR. JULIANO:

Q Captain, in your opinion where should an emergency generator room be located aboard a tank vessel?

* * *

Q Even though there is no rule for the automatic starting of the emergency generator when there is a power failure, is this standard practice in the marine industry?

A Yes, it is, and it is very important, it should be that way.

MR. JULIANO: No further questions.

Thank you.

MR.DALY: No further questions.

THE COURT: All right.

You are excused, Captain.

(Witness excused)

H E R B E R T W I L L I A M B A N K S,

called as a witness by the defendant, being first duly sworn,testified as follows:

DIRECT EXAMINATION

BY MR. JULIANO:

Q Captain Banks, where do you reside?

A At 214 Gate House, Salem Harbor, Andalusia, Pennsylvania.

Q By whom are you presently employed?

A Mobil Oil Corp.

Q How long have you been employed by Mobil Oil Corp.?

A Eighteen years.

Q Captain, could you please briefly give us your professional background?

A Yes.

I joined the Coast Guard in 1939 and saw service until 1945.

I thn joined the United States Naval Reserve in 1947,a nd had active duty from 1950 to 1952.

Then I went to work for the Brooklyn Army Terminal in Brooklyn, New York, on their harbor craft, tugboats specifically.

I was laid off there in 1957, when I joined Mobil Oil Corp.

Q Do you hold any license?

A Yes, I do.

Q What license do you hold?

A I have a Coast Guard license.

Q What license is that?

A It is for merchant marine officer and I have master of steam and motor vessels of not over 2000 gross ton upon bays, sounds and lakes other than the Great Lakes, operator of uninspected towing vessels upon oceans not more than 200 miles offshore and the inland waters of the United States, not including western rivers. First class pilot of

steam and motor vessels of not over 1000 gross tons upon waters of the New York Zone.

Q When was the license issued, by the way, Captain?

A This particular one was issued on May of 1971.

Q Is this a reissue of the previous license?

A Right.

Q On March 17, 1971, were you employed by Mobil Oil Corp., is that correct?

A That is correct.

Q In what capacity were you employed on that date?

A I was master of the Motor Vessel Mobil Trader.

Q How long before March 17, 1971 had you been master of the Mobil Trader?

A Just prior to her coming into the service, 1968.

Q I'm going to call your attention to March 17, 1971.

What time did the Mobil Trader start work on that day?

A 0700 hours.

Q What job did you have at that time?

A To proceed from Port Mobil to Dikeman Street, Brooklyn.

Q What is Port Mobil?

A Port Mobil is a tank terminal where vessels

load and discharge cargo.

Q Could you describe Port Mobil for us?

A It is a tank farm, the dock area is capable of taking care of five barges, a ship terminal. At each barge berth there is what we call a header, which is a number of pipelines running from the various tanks in the farm down to the dock area where we connect for loading and discharging cargo.

Q In other words,at each berth, each barge can be serviced?

A That is correct.

Q What if anything did you have to do at Dikeman Street, Brooklyn?

A Discharge cargo to the motor vessel Beaie Comeu.

Q How long did that job last?

A Two hours.

Q Did you receive orders on that day for a job on the M/V Trade Daring?

A Yes, I did.

Q What time was that?

A Either late morning or early afternoon.

Q And who gave you theorders for the Trade Daring?

A The Mobil dispatcher.

Q How did he convey those orders to you?

A On the radio telephone.

Q What was the order that was conveyed to you by the Mobil dispatcher?

A To proceed to Port Mobil and load 375 net long ton of bonded bunker diesel for the Trade Daring.

Q Did you go back to Port Mobil to load up?

A Yes, I did.

Q Did there come a time when you arrived back in Port Mobil?

A Yes, there was.

Q Captain, I show you a document which is designated as Trial Exhibit 22 and I ask you to identify that.

A Yes, I can.

Q What is it?

A It was the logbook of the Mobil Trader from January 21, 1971 until March 23, 1971.

Q If you need the logbook to refresh your recollection at any time, please feel free to do so.

What time did you come back to Port Mobil?

A I arrived at Port Mobil 1340 hours.

Q When you arrived back at Port Mobil, what if anything did you or any member of your crew do?

A Upon arrival I immediately called our dispatcher over the radio telephone, telling him the time of arrival,

and reconfirming the order for the Trade Daring, which was still 375 net long ton of bonded bunker diesel.

Milano went ashore and notified the --

Q Who was Milano?

A The AB tanker man aboard the Mobil Trader, went ashore,and by a land phone notified the gauger's office at Port Mobil that we were in berth.

MR. DALY: Move the answer be stricken unless the foundation is laid that the witness was present or overheard this conversation between the pumpman and the officer.

Q What is the standard pratice when you get to Port Mobil?

A I call my dispatcher over the phone and either I or one of my crew members notifies the gauger's office via phone.

Q Did you dispatch your pumpman to advise the gauger?

A I did.

Q Of your arrival?

A Right.

Q Were your instructions carried out?

A Yes.

Q What was the pumpman's duties when he went ashore?

A To tell the gaugers that we were in berth, ready to load, to check what the load was to be, and also at that

time if possible to get the API gravity of the cargo.

Q Did Milano report bak to you that he had carried out your instructions?

A Yes, he did.

Q Was the order verified with the gauger's office?

A Yes.

Q Did there come a time when a gauger became present at the vessel?

A Yes.

Q Who was the gauger?

A Kelly.

Q What if anything did you do with the guager Kelly?

A We got together with Kelly and again checked with him to see if his order was the same as ours, the 375 net long ton bonded bunker diesel for the Trade Daring.

Q Was it the same?

A It was, yes.

Q What other information did gauger Kelly provide to you?

A He also gave me the API gravity for this particular product.

Q Do you want to tell the Court what API gravity is?

A The API gravity is a function of the specific

gravity.

Q What do you do with this API figure?

A I use this in my calculations for going from the net long ton to gross gallons.

Q You do this in conjunction with any other figures?

A Yes, I do.

Q What figures are those?

A I also use the temperature of the product.

Q When do you obtain the temperature of the product?

A As the vessel is being loaded, and there is sufficient amount in the tank to take a temperature.

Q Did there come a time when the vessel commenced loading?

A Yes, there did.

Q What time was that?

A 1420 hours.

Q Was the temperature taken as the vessel was being loaded?

A Yes.

Q What was the temperature at that time?

A 45° Fahrenheit.

Q What did you do with the API figure?

A I then used those in calculating going from net long ton to gross values.

Q What is the purpose of that? Why do you want to do that?

A I need the gross gallons so that I can determine how many gallons of the product I'm putting in, what particular tanks I'm going to put the cargo in.

Q Did you decide what tanks you were going to put the cargo in?

A Yes.

Q What tanks?

A Port 1, Port 3 and Starboard 3.

Q Did you convey that information to the pumpman on board the vessel?

A Yes, I did.

Q How does he know how much cargo to put in each tank?

A I had told him- we have a blackboard in the galley, marked off as the tanks of the vessel--

Q Are you saying you have a diagram of the tanks on the vessel on the blackboard?

A Yes, that is correct.

I put these figures, my ullages and the amounts in the tanks that we are using for that particular job.

I also go out on deck and write these figures or write the ullages alongside the ullage pipe for the particular

tank that I want the cargo to go into and I tell him verbally.

Q Did you do this on this occasion?

A I did.

Q You wrote on the blackboard the ullages and you wrote on the deck?

A That is correct.

Q What was the API gravity?

A 31.9.

Q Could you tell us how many barrels in long ton at that API figure?

A 7.396.

Q Did you determine your gallonage, did you use any tables?

A Yes, I did.

Q I show you Exhibit 25, and ask if you can identify that.

A Yes, these are the ullage tables of the Mobil Trader.

Q Those are the tables you used to determine how many gallons to put in each tank?

A Into each tank, right.

Q What time did you start loading this cargo?

A 1420 hours.

Q When was loading completed?

A 1520 hours.

Q What did the vessel do after loading was completed?

A After the loading was completed, the crew and Kelly disconnected the hose, swung it aboard the vessel, made it fast, and then Kelly and Milano took the gauges or ullages.

Q How did they go about taking these ullages?

A With a tape and they measured the empty space in the tank that has been partially loaded.

Q Do they note these figures down some place?

A At this time Kelly writes it down in his little book, yes.

Q Are any temperatures taken at this time?

A Exactly right.

MR. DALY: Your Honor, again, I don't believe a foundation has been laid that this particular witness was at this particular place watching these things being done.

THE COURT: Ask him.

MR. DALY: No proper foundation has been laid.

Q Were you there to see this operation?

A No.

Q Is this a standard operation and procedure on

board this vessel?

A This is the only way it can be done.

Q What did they do with these ullage figures that have been taken?

A Kelly brings them in to me. I have my tables ready for him, and we do [illegible] in the galley.

Q What do you do?

A He gives me the ullages. I have the ullage tables in front of me, find out how many gallons for each tank, and he writes this down on his barge report.

Q I show you Exhibit 24 and I ask you if you can identify that.

A Yes, I can. That is the barge report for the Mobil Trader on March 17, 1971.

Q How many gross gallons did you load that day?

A 115,424.

Q Is there anything you do with that figure of gross gallons? Is that converted?

A Yes. I convert the gross gallons into net long ton.

Q I show you page 3 and page 4 of Exhibit 24.

Can you identify these calculations for me?

A Yes, I can.

Q What are they?

A This is the conversion from the gross gallons to net long ton.

Q How many net long tons did the Mobil Trader load on that day?

A 373.80 net long tons.

Q I show you the last page of this document.

Can you tell me what that is?

A Yes, I can.

Q What is it?

A This is my diagram of what I put on the black-board. This is after the loading now.

Q Does this have your signature on it?

A Yes, it does.

Q Whose signature is this?

A Thatis Kelly, the gauger's.

Q What was the temperature of the cargo at loading?

A 45°.

Q I show you another exhibit, which is Exhibit 87.

I ask if you can identify this.

A Yes, I can.

Q What is it?

A This is the shore tank report for tank No. 9.

Q Which holds what kind of fuel?

A Bonded bunker diesel.

Q Does that have a figure as to the net gallons withdrawn from that tank?

A Yes, 115,995.

Q How does that figure compare with the figure taken aboard the vessel?

A It is unbelievably close, less than three barrels difference.

Q Getting back to the Mobil Trader, what is her length?

A 210 foot long.

Q What is her width?

A 35 feet.

Q Her light draft?

A 00 forward and 3' 6", that would be 3 foot, 6 inches aft.

Q How many tanks do you have on board?

A I have four tanks divided into two compartments for each tank, a total of eight compartments, four tanks.

Q What was the conditionof all the tanks on the Mobil Trader prior to the time she took on cargo at Port Mobil for the Trade Daring?

A All the tanks were empty.

Q How do you know all the tanks were empty?

A Milano telling me; I spot-checked occasionally;

my prior delivery receipts and activity reports, and most important of all, is my blackboard.

Q Why do you say"most important of all is my blackboard"?

A Because when we are loading or after we are loaded, and I have my figures on the blackboard to show what we are taking to a ship,likewise after we are finished, if all the cargo has been pumped out, I erase the blackboard, showing there is nothing in any standing.

If there is anything left over in any tank, it is on the blackboard, the amount of gallons, the name of the vessel.

Q What was the --

MR. DALY: Your Honor, must again object. The witness is not putting himself in the position of being in aplace to observe. He is apparently relying on hearsay from the pumpman and so forth, and he tells how deep the tanks are loaded by looking at his blackboard.

I assume this will be connected up, but I do want to preserve my position that this witness has not established that.

MR. JULIANO: Do I understand he is saying how deep the tanks are by the blackboard?

MR. DALY: How deeply the tanks are loaded.

THE COURT: As the master of the vessel I assume that he is responsible for it when he gets these reports from people who are employed on the vessel.

MR. DALY: Yes, your Honor.

THE COURT: It will probably be connected up. I will permit it.

BY MR. JULIANO:

Q To make the record clear, we should once again repeat - what figures do you have on this blackboard; what do these figures represent? Cargo?

A Cargo left in the tank or in a tank.

Q What was the condition of the blackboard on the day that you took on cargo destined for the Trade Daring?

A The blackboard was wiped clean.

Q Are there any documents which substantiate the fact that these tanks were in fact empty?

A Yes, the prior delivery reports, and the activity report.

Q I show you a series of documents here.

Let's start off with a document from 73, Exhibit 73 through 77.

What are these exhibits?

A These are delivery receipts prior to the loading of the Mobil Trader for the Trade Daring.

Q What does a delivery receipt tell you?

A It tells me the net long tons that I have delivered to the vessel.

Q I note that there are columns and there are tank designations and the words "open" and "closed."

Would you please tell the Court what it signifies when you have a figure written oposite the word "close" in a certain tank -- I am sorry, "open"?

A Written alongside the word "open" tells me the amount of gallons I have in the tank prior to discharge.

Q What happens if there is a figure opposite the word "close"?

A That shows me the amount of gallons of cargo that I have left after discharge.

Q Is what you just testified to exemplified by Exhibit 75?

A Yes, it is.

Q That is a delivery receipt for what ship?

A The U. S. S. Compass Island.

Q That is a Navy vessel?

A Navy vessel, that's why it is U.S.S.

Q Take for example tank No. 4, you have a figure opposite the word "close"; what is that?

A Yes, I do. I have 23,002 gallons.

Q Opposite the word "open"?

A Is 36,698 gallons.

Q What does that mean?

A This means that there was a shut-out on that delivery.

Q That means -- all right. That is fair enough.

Q What is a shut-out, by the way?

A A shut-out is when there is cargo left over after a delivery has been made.

Q How does a shut-out come about?

A By the engineer who is taking the cargo aboard the ship that we have been alongside of, telling us to stop, or else in an emergency, would shut it down himself.

Q What happens if he closes down against you?

A Then our relief valve opens and the cargo is recirculated through our lines.

Q Now I show you Exhibit 78.

Tell the Court what that exhibit is.

A This is the delivery receipt for the Trade Daring.

Q Did you make out that receipt?

A Yes, I did.

Q What time did you finish bunkering the Trade Daring?

A 0045 hours.

Q I call your attention to the upper right-hand corner where there is a notation, "finished pumping."

What time do you have written inthere?

A 2345 hours.

Q How do you account for the difference?

A It was an honest mistake.

Q I show you Exhibit 79, 80 and 81.

What are they? What documents are they?

A These are my activity reports.

Q What do the activity reports tell you?

A These tell me everything that went on the vessel during that particular voyage.

Q Does this tell you what happens to a shut-out if you have a shut-out?

A Yes, it does.

Q How about that shut-out we just referred to on the Compass Island, does that tell you what happened to that shut-out?

A Yes, it does.

Q What happened to that shut-out?

A We had loaded on top of the shut-out with another product.

Q Was that product destined for another vessel?

A That is correct.

Q I call your attention to Exhibit 82.

What is that?

A This is the activity report for the voyage to the Trade Daring.

Q I call your attention to the notation on the back side of the activity report, in the lower left-hand corner; what was the condition of the vessel tanks before loading?

I see here written the lettersMTY.

Did you write that?

A Yes, I did.

Q What does that signify?

A That the vessel's tanks were empty.

Q And also the fifth, the sixth line down, what was the condition of the vessel's tanks after discharging? Same letters.

A Empty.

Q Meaning the same thing?

A Yes.

Q Is this your signature?

A Yes, it is.

Q Does this tell you what time you finished bunkering the Trade Daring?

A Yes, it does.

Q What time was that?

A 0045.

Q Did you make a similar notation in your logbook?

A Yes, I did.

Q I show you Exhibit 72.

Could you tell the Court what this is?

A That would be a pictorial representation of what had gone on prior to and including the Trade Daring as far as loading and discharging of cargo, as far as the Mobil Trader was concerned.

Q Does it contain information that is in these delivery receipts and activity reports that we have just been talking about?

A Right, that is correct.

MR. JULIANO: Your Honor, this exhibit was prepared just for the benefit of the Court to try to understand this.

THE COURT: All right.

MR. JULIANO: Thank you.

Q How mahy engines does the Mobil Trader have on deck for the deliveryof cargo?

A Two.

Q Where are they located?

A Forward of the house.

Q How are they designated?

A Port engine and starboard engine.

Q How many functions does the starboard engine have?

A One.

Q What function is that?

A To pump cargo through the starboard pump.

Q How many functions does the port engine have?

A Two.

Q What functions are they?

A To pump cargo through the port pump and to energize the hydraulic system for raising or lowering the boom.

Q When do you activate the port engine and energize the hydraulic system and raise and lower the boom?

A Before discharging and after discharging.

Q Whose duties are it to start that engine?

A Milano.

Q I call your attention to Exhibit 33A which contains a series of photos, and I have numbered the photographs, your Honor.

I call your attention to the first photograph in 32A. Would you please show the Court where the hydraulic controls are, the hydraulic pump, I should say.

A Right here.

Q Would you please label that "hydraulic pump"?

(Witness complied)

Q And where is the port engine?

A Where is the port engine?

Q Yes.

Would you label that, please.

(Witness complied)

Q I show you photograph No. 2.

Once again, just label the pump, the hydraulic pump. Circle it, if you will.

(Witness complied)

Q That is it.

MR. JULIANO: Does your Honor want to see this as we go along?

THE COURT: Yes.

Do you have more that you are going to mark?

MR. JULIANO: Not mark, but maybe just point out to the Court.

THE COURT: All right.

Q And on No. 4, does that also show there?

A Yes, it does.

Q Would you point that out to the Court, please, so that the Court may see it?

A This is the hydraulic pump.

THE COURT: All right.

Q Now on No. 12, it would be either view, is that

correct?

A Yes.

Your Honor, this is again the hydraulic pump.

Q On picture No. 17, would you tell us what controls this is?

A This is the winch used for raising and lowering the boom.

Q Is that served by that hydraulic pump?

A It is.

Q Do those lines come from the hydraulic pump to this winch?

A They do.

Q Why don't we just label this, please, "hydraulic winch"?

(Witness complied)

Q What did you do at Port Mobil after the loading took place aboard the vessel?

A We waited delivery time.

Q When was delivery time?

A 1930 hours.

Q Where was the Trade Daring located?

A State Street, Hess, Perth Amboy.

Q Where is that in relation to Port Mobil?

A Across the kills from Port Mobil.

Q Did there come a time when you went to the Trade Daring?

A Yes.

Q Did there come a time when you arrived at the Trade Daring?

A Yes.

Q What time was that?

A Time of arrival was 1920 hours.

Q Did you make fast?

A Yes, I did.

Q What time was that?

A 1930 hours.

Q What side did you make fast to?

A Starboard side to.

Q What side of the Trade Daring?

A Trade Daring side was starboard side also.

Q What lines were used to make fast?

A Two forward and two aft.

Q Did there come a time that hose connections were made between the Mobil Trader and the Trade Daring?

A Yes

Q What time was that?

A 2220 hours.

Q Where were you at that time?

A In the galley.

Q Did there come a time when you started delivering bunkers to the Trade Daring?

A Yes.

Q What time was that?

A 2250 hours.

Q Where were you during the time the vessel was delivering bunkers?

A All over, the wheelhouse, my quarters, galley, on deck.

Q Did there come a time when you finally went to your quarters prior to the final delivery of bunkers?

A Yes.

Q What time was that?

A 0030 hours.

Q Did you speak to anyone aboard the Trade Daring at or about that time?

A Yes, I did.

Q Who did you speak to?

A The cpatain of the Trade Daring.

Q What was the conversation?

A He asked me if we could go faster.

Q What did you tell him?

A We were going as fast as we could.

Q Did there come a time when the delivery of bunkers was completed?

A Yes.

Q What time was that?

A 0045 hours.

Q Who notified you of that fact?

A Milano.

Q How did he notify you of that fact?

A He stuck his head in from the main deck through the galley door, up my companionway, and hollered up, "I'm blowing the line."

Q Where were you at that time?

A In my quarters.

Q What did you do next?

A I then completed making out the delivery receipt.

Q How long did that take you?

A About a minute.

Q Then what did you do with the delivery receipt?

A I reached down alongside of my chair and picked up a briefcase, put the delivery receipts in it, put on my jacket, went out the wheelhouse, -- oh, went up to the wheelhouse through the port wheelhouse door and down the port ladder to the main deck.

Q When you got to the main deck, were any of the

engines running?

A Yes.

Q What engine was that?

A The port engine.

Q What function did it serve at that time?

A To energize the hydraulic system for raising and lowering the boom.

Q Why would you want to raise and lower the boom?

A This would be necessary, the ship was high, and when we brought it back on board the vessel, we'd have to lower it.

Q What did you do when you got on the deck of the Mobil Trader?

A I walked up the deck and crossed over to the starboard side and Milano and I put up Mobil Trader's ladder.

Q Is this the path? Why don't you look at Exhibit 33B and show the Court what path you took going from the wheelhouse down to the main deck?

A Right. Your Honor, I come out this door up here, there is a little ladder down here.

Q Indicating-- tell the judge what you are indicating.

A This is the port door of the wheelhouse, down

the ladder from the wheelhouse door on the port side -- we call it the boat deck -- then down the ladder to the main deck, on the starboard side, port side.

Q What engine is depicted on the left side of this photo?

A The port engine used at this time to energize the hydraulic system.

Q Did you assist Milano with the ladder?

A Yes, I did.

Q How long did that take?

A About two or three minutes.

Q Then what did you do?

A Then I climbed the ladder.

Q About what time was that?

A Now about 0050.

Q Did you get to the top of the ladder?

A I arrived at the top of the ladder.

Q What did you do?

A And then there is a line attached to the top rung of the ladder. I looped this around the rail of the Trade Daring, lowered the bitter end down to Milano and he made it fast at the bottom of the ladder.

Q What function did that line serve?

A This keeps the ladder from falling away from the

side of the ship.

Q Then what was the next thing you did?

A I walked forward on the Trade Daring to what I call the pumping station.

MR. JULIANO: Mr. Daly, may I have the photographs, No. 1.

Q You stated you walked to the pumping station?

A Yes.

Q I show you Exhibit No. 1 which is a photograph, and I ask you if that is a fair and accurate representation of the pumping station.

A Yes, it is.

Q Do you recognize or can you identify anything at that pumping station?

A Yes, that is Mobil Trader's 12 foot, 4 inch hose.

Q How many hoses did the Mobil Trader use on this occasion?

A Two.

Q What hoses were those?

A That was the 30 foot, 6 inch hose and this 12 foot, 4 inch hose.

Q The 30 foot hose was connected to this 4 inch bulkhead hose?

A It would be 4 inch in diameter.

Q You arrived at the bunkering manifold?

A Yes.

Q How long did this take?

A About a minute.

Q Did you see anybody on deck at the manifold?

A No, I did not.

Q What did you do next?

A Then I walked aft towards the chief's quarters in the afterhouse of the ship.

Q What purpose did you have to go to the chief's quarters?

A To have the chief engineer sign the delivery receipts.

Q Is this normal practice?

A Yes, it is.

Q What happens to the delivery receipt when you get to the chief engineer's quarters?

A He keeps a copy or two and the rest go to our New York office.

Q What was the condition of lighting on deck at that time on the Trade Daring?

A The deck was lit but poorly.

Q Did you proceed aft?

A Yes, I did.

Q What if anything happened?

A Then the large ball of flame came out of what appeared to be the skylight just to the left side of the stack of the Trade Daring.

Q What did you do?

A I stood there awestruck.

Q How long did you stay there awestruck?

A Oh, I'd say maybe ten seconds.

Q What were you waiting for?

A A second explosion.

Q At that time did you see anybody?

A After this happened and occurred, and my eyes lowered down, I saw a man coming out of the door on the starboard side of the main deck from the afterhouse.

Q From the afterhouse?

A From the afterhouse, carrying what appeared to be a bundle of clothing in his arms.

Q How did you see this, what kind of illumination?

A At this time the illumination - there was light from the fire behind him in the afterhouse.

Q About how many ships have you bunkered on the Mobil Trader?

A Over 700.

Q Is that a conservative estimate?

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A Yes.

Q How would you characterize the job of bunkering vessels?

A It is one of extreme vigilance. I in particular want to hear the word "stop pumping"; that we are finished.

Q What is the one thing you wait for on this type of a job?

A To be told to stop pumping.

Q What is the one thing you do when you are told to stop pumping?

A We stop pumping.

MR. DALY: Your Honor, I object. These generalities really don't add anything to the facts of the case.

THE COURT: I agree.

MR. JULIANO: I will withdraw that, your Honor.

Q Have you seen the hose, the bunkering hose on the Mobil Trader at all stages of operation?

A Yes, I have.

Q When the Mobil Trader is delivering bunkers at the maximum rate, what motion, if any, would you see on the cargo hose?

A There is no motion.

Q Why is that?

A Because the oil is flowing right through the hose

without any disturbance at all.

Q If a vessel you were bunkering overflowed its tanks, what would be the expected result?

A That the oil would come up out of the vent pipes and spill on deck.

MR. JULIANO: Thank you, Captain.

Your witness, counsel.

THE COURT: In view of the hour, gentlemen, I think we will adjourn for luncheon recess, and be back at two o'clock.

(Luncheon recess)

AFTERNOON SESSION

2:00 p.m.

H E R B E R T W I L L I A M B A N K S, resumed:

CROSS-EXAMINATION

BY MR.DALY:

Q Captain, do you recall meeting with Mr. White of the legal staff of Mobil later that morning, that is, on the morning of the fire on March 18, 1971?

A No, I don't recall that.

Q You don't recall meeting him?

A No, I don't.

Q Do you have an entry in your logbook showing that he was logged aboard?

A That is exactly right.

Q It doesn't refresh your recollection?

A No, sir.

Q Have you at any time before appearing here today reviewed or read over Mr. White's report?

A Yes.

Q When did you read that report for the first time?

A Several days ago.

Q This was the morning right after this apparently dreadful fire, counsel came on board, according to your logbook, and you don't remember talking to him at all?

* * *

A I would say about eight feet, nine feet the most.

Q You referred in your testimony this morning to various figures that were inscribed on a blackboard that was in the galley, is that correct?

A That is correct.

Q And those figures were ullages, were they?

A That is correct, ullages and also gross gallons.

Q All of those figures were based on ullages presumably taken by someone other than yourself, is that correct?

A That is correct.

Q During the period March 16th through March 19th, 1971, did you at any time take ullages?

A No.

Q That wouldn't normally be your function, would it?

A No.

Q Is there a door between the wheelhouse and your quarters?

A Yes, there is, but I keep it open all the time.

Q When Mr. Milano called you on the morning of March 18th, 1971, were you asleep in your quarters?

A No.

Q Did you read in Mr. White's statement something to the effect that you were asleep at the time Mr. Milano came to call you?

A Yes.

Q And you say that you were not asleep, is that correct?

A Well, that was Mr. White's statement, not mine.

Q Of course.

Q Did Mr. Milano come into your room or cabin to call you?

A No, sir.

Q You recall that you testified by deposition over a year ago, June 13, 1974, in this case, did you not?

A Yes.

Q And do you recall giving this testimony at that time, line 14, page 42:

"Q When Mr. Milano came down to your room at about 0045 hours, he told you he was blowing the line, is that correct?

"A Right."

The "right" is stricken out and in pencil after that is "When he called up to me in my room, he told me that he was blowing the line."

Now, did you make that change in your testimony?

A Yes.

Q Do you recall when you made that change?

A No, I don't. What date? No.

Q Did you confer with counsel when you made that change?

A That was- I had that in my possession at the time and to go over it and see if there were any errors.

Q And that is one of the changes made?

A Right. That was before I had signed the statement. At no time in our career onthat vessel has Milano-- I can't say that?

THE COURT: Just in case counsel did not tell you, I will tell you. Don't volunteer anything, just answer his questions.

THE WITNESS: Yes, sir.

Q Reading again from your deposition at page 43, do you recall this testimony:

"Q When Mr. Milano told you that he was blowing the line, when he came to your room at about 0045 hours, did you immeidately leave your room?

"A No."

The "no" is stricken out, and in pencil is this wording: "I did not leave my room immediately after Mr. Milano had called up to me."

Do you recall when you made that change?

A The same day I made the previous change.

Q Did you confer with anyone about making that change?

A No.

Q Were you in your bunk when Mr. Milano called you?

A Yes.

Q How long had you been there?

A Well, I had been in my quarters off and on from about 0030. I would like down for a moment, get up again, back and forth, and so forth.

Q And when did you finally get in your bunk for the last time before Mr. Milano called you?

A Just prior to before he called me.

Q How many minutes before?

A Maybe two or three.

Q Didn't you realize that the bunkering would soon be over and the vessel was going to have to get in shape to leave?

A Yes, I did.

Q And you were in your bunk at that time?

A I had to get up very early the next morning.

Q Captain, what does the term "clean delivery" mean to you?

A That all cargo for that vessel has been pumped into the vessel.

Q Now, when Mr. Milano called to you, forgetting where he called from, did he call to you "clean delivery"?

A I remember "blowing out the line. "

Q You remember he said he was blowing out the line?

A Yes.

Q He did not tell you that delivery was complete?

A Not that I remember.

Q Now, the pump and engine that were being used to bunker the Trade Daring, that pump and engine were located on the starboard side?

A That is correct.

Q Does the engine that drives that pump make sufficient nose to be heard in your cabin when it is going at the maximum revolutions?

A Yes, it does.

Q Does it make any different kind of noise when the engine is going and the clutch is disengaged?

A Yes, there is a difference.

Q You can notice the difference, can you?

A If I'm thinking about it, yes.

Q Well, standing alongside the diesel engine that

drives this pump, when it is going at its maximum revolutions is it possible to converse in a normal conversational tone?

A No way.

Q Now, how long after Milano called you did you leave your cabin?

A Roughly, maybe a minute and a half, two minutes at the most.

Q Do you recall testifying on your deposition about a minute?

A Right. Right.

Q Now, after Milano called you, did you hear him turn the pump off?

A Yes.

Q And that was during the minute or so after he called you before you left your cabin, you heard him turn the pump off?

A Yes, sir.

Q You could hear the engine going in the cabin and you heard him turn it off, is that correct?

A Yes.

Q According to your records how many gallons of bunkers or cargo, as you would call them, were loaded for the Trade Daring?

A It was 115,424 gross gallon.

Q And how many did you deliver?

A 115,424 gross gallon.

Q Exactly as to the gallon?

A Well, there's always some residue left on the sides of the tank and so forth, yes.

Q How were these tanks loaded? I understand you had certain bunkers or certain cargo loaded in No. 1 port, others in No. 3 port, and No. 3 starboard, is that correct?

A Yes.

Q Did that give the Mobil Trader a slight list to port?

A That is correct, after she was loaded, yes.

Q After she was loaded,yes?

A Yes.

Q How many degrees list would that give it?

A Very little. I don't even take it into consideration.

Q How many gallons were in the port forward tank, if you recall?

A I would have to look at the delivery receipt. 7,641 gross gallon.

Q How many tons would that equate to?

A I'd have to figure it out.

* * *

bunkering, did you take that from your watch?

A No.

Q Where did you get it from?

A The clock on the bulkhead, right next to my desk.

Q What time is indicated on that receipt?

A 2345.

Q 2345. That wasn't the actual time at all, was it?

A No, sir.

Q Looking at that particular entry, has there been any change made in that?

A It would appear to be, either that or I was writing over, right. Not necessarily a change.

Q Do you know if there was a change or not?

A No, no.

Q In good practice on board ship, isn't it correct that any change in any official document should be made by lining out the entry so it is legible, and then inserting the correction next to it?

A Right. In the log.

Q In fact, almost any record, seaman's record, is done that way, isn't it?

A Yes.

MR. JULIANO: Your Honor, at this time, just to make the record clear, Mr.Daly's Exhibit 23 is identical

with our 78.

Q Now the various times you have entered in the logbook, were they all made on the basis of either your wristwatch or the clock in the wheelhouse?

A Yes; where I happened to be, and there is a clock.

Q What did you do with this delivery receipt when you completed it?

A I took it up to the Trade Daring.

Q Did you deliver it to anyone at that time?

A No, sir.

Q What did you do with it then after you took it up to the Trade Daring?

A Well, I was walking aft to give it to the chief engineer when the fire occurred.

Q What did you do with it then?

A I took it back down the Mobil Trader.

Q What happened to it then?

A Then I mailed it into the office.

Q Into your office?

A Yes.

Q After you got away from the Trade Daring, that is, after the fire, did you discuss the circumstances surrounding this incident with Mr. Milano, your pumpman?

A Yes, I did.

* * *

the pump is engaged and when it is not engaged, is that right?

A Right.

Q These ullage holes on the Trade Daring tanks, where are these ullage holes located with respect to the midline of the tank?

A I would say very close to the midline.

Q Very close to the midline but are they on the midline?

A I couldn't say for sure. I never noticed.

THE COURT: Are we talking about the Trade Daring?

MR. DALY: I said the Trade Daring.

THE COURT: You are talking about the Mobil Trader.

MR. DALY: The Mobil Trader, yes, your Honor.

A Yes.

Q After you say Mr. Milano called you, in about a minute or so you went down below, with Mr. Milano's assistance you put up the ladders, climbed up the ladder and were walking across the deck toward the chief engineer's quarters, and you saw this huge ball of flame come up, is that correct?

A Well, when I got up on the top of the ladder, there were several things I did before I started walking aft.

* * *

left the scene of the fire, that the master of the Trade Daring had told him to stop pumping?

A Yes.

Q What did you do after getting back on board the Mobil Trades, after noticing this fire?

A Well, I went back and told Mr. Milano and Mr. Beekman to start up the engines, the ship was on fire, and we had to get away with all possible haste.

Q Did you notice that there were tugs standing by attending the vessel?

A There was tugs there.

Q Did you understand that the reason the pilot told you to get away from the side of the Trade Daring was that they wanted to use the tugs to get the Trade Daring away from the pier?

A Yes, sir.

Q As a seaman, you were not surprised by the pilot's order, were you?

A No.

Q You were not inclined to disregard it, were you?

A In no way.

Q Before pumping commenced, did you have any conversations with the personnel of the Trade Daring?

A Would you repeat that, please?

* * *

present-- is it possible that you had had this delivery receipt made up in advance, anticipating a full delivery?

A No, sir, I never do this.

Q You have on the top indicated "Date Loaded, March 17, 1971."

A Right.

Q The loading was actually completed on March 18, is that correct?

A Yes.

Q Where did the Mobil Trader go after leaving the Trade Daring,right after the fire?

A To Port Mobil.

Q And what did you do at Port Mobil?

A We tied up, secured for the night.

Q And you got some well-deserved rest, I suppose?

A Three and a half hours.

Q And what did you do then, after you completed your period of rest?

A We got up, that is, Beekman and I got up and we proceeded to load for the next ship.

Q Do you recall the name of the ship you next loaded?

A Is it the Pula?

Q The Pula, is that the Pula, you say?

* * *

MR. JULIANO: The only comment I want to make is the ocean tank or barge order, the document that he cannot identify, that is the only objection I have.

THE COURT: For what its worth.

MR. JULIANO: No argument otherwise.

xx (Plaintiff's Exhibit 60 received in evidence)

Q Captain, after leaving the Trade Daring, that is, after the barge Mobil Trader left the Trade Daring, the tanks of the Mobil Trader were not ullaged before loading at Port Mobil, were they?

A That is correct.

Q You just loaded the same product that had been delivered, the same type of product that had been delivered to the Trade Daring in the same tanks that had last been discharged into the Trade Daring, is that right?

A Yes, the empty tanks, right.

Q Captain, do you have the logbook with you there?

A I had put it back on the table.

MR. DALY: May I have the logbook?

MR. JULIANO: Yes.

Q Looking at the dates March 16, 17, 18 and 19, can you tell us on how many occasions cargo was shut out from the Mobil Trader?

A On March 16 we had a shut-out.

Q And how much was that shut out?

A 23,002 gallons.

Q Do you know how many tons that would be?

A Not offhand, no, sir.

Q Do you have an approximation?

A No, I don't.

Q That was on March 16?

A 16th, right.

Q What about March 17, any shut-outs on that date?

A No, sir.

Q March 18, any shut-outs on that date?

A No, sir.

Q How about March 19?

MR.JULIANO: I object. Irrelevant.

THE COURT: I will let him answer.

A I have down here pumping, shut-out. Right.

Q How much was shut out?

A 27,110 tons.

THE COURT: Tons? Gallons?

A Excuse me. Gallons, gross gallons.

(2) Q I believe you testified on direct examination that ordinarily when cargo is shut out by a vessel, which means it doesn't really want to take any more, I suppose, in ordinary course that is done by a signal from the

personnel of the vessel to the barge, is that correct, in ordinary course?

A Yes.

Q And you did mention that in certain emergency situations, perhaps the vessel itself might close out?

A Yes.

Q In ordinary course it would be a simple waving of the hands, as I'm doing now, crossing the wrists back and forth, is that so?

A That is right.

Q Since you testified by deposition back in June of 1974, did anybody advise you that a pilot Cesare Del Greco had also given a deposition in this case?

A Yes.

Q And did you read his deposition?

A No.

Q Were you told in effect what he said by anyone?

A Yes.

Q And did whoever told you-- were you advised that Pilot Del Greco boarded the Trade Daring and about, oh, a quarter of a minute or so before he saw this ball of fire, he looked down on the Mobile Trader and saw the pipe moving, the hose moving, and heard the engines going; do you recall being advised of that?

* * *

Q You are quite sure it wasn't there, aren't you?

A Yes.

Q Who was operating this hydraulic pump?

A Milano.

Q What did Mr. Milano do after he activated the hydraulic pump? What did he do with it?

A He used this to raise and lower the boom.

Q He did?

A No, he didn't, no.

Q As a matter of fact, wasn't it really Mr. Beekman who manhandled the tackle to swing the boom over?

A That is correct.

Q In its upright position after Milano had disconnected the hose?

A Right.

Q You read that in Mr. White's statement, did you not, that Mr. Beekman actually handled the tackle?

A Not that I recall in Mr. White's statement, but I remember him doing it.

Q Captain, why do vessels shut out acrgo occasionally?

A Basically because they can't take the product.

Q And they order more than they can take, really?

A Sometimes.

Q It is common enough, isn't it?

A Yes.

Q Bunkers in New York are very cheap compared to bunkers in other portions of the world, aren't they?

MR. JULIANO: I object to the question.

MR. DALY: I will withdraw that. It is in the contract we have.

Bear with me, your Honor. I don't believe I have further questions, but I'd like to consult with counsel.

(Pause)

MR. DALY: I have no further questions, your Honor.

THE COURT: All right.

REDIRECT EXAMINATION

BY MR. JULIANO:

Q Captain Banks, the hydraulic pump that is alongside theport engine, does it have a clutch on it?

A Yes, it does.

Q What is the normal operating position of that clutch?

A That is open all the time.

Q THat means it is engaged at all times?

A It is engaged at all times.

Q I call your attention to Trial Exhibit 60, on the

* * *

MR. WAESCHE: I'm sorry, your Honor, I should address my remarks to the Court.

THE COURT: All right.

MR. DALY: Your Honor, may I make one statement, merely to clarify a position I took on the record the other day, and that is that we had the pilot under subpoena, and I indicated counsel for defendants could take advantage of that subpoena, but inasmuch as his testimony was already an exhibit, perhaps it might not be necessary to produce him, and it in fact was their exhibit, and counsel indicated that they have no particular desire to call him, and they said do what you want.

I probably will not call him. I just wanted to clarify that because on the record it stood that I was giving them the benefit of my subpoena.

THE COURT: How many more witnesses do you have?

MR. JULIANO: I just have the last witness, your Honor.

THE COURT: You have the last witness, and then Mr. Daly, what is your position?

MR. DALY: I have one rebuttal witness. It will be actually Mr. Argyriadis to pick up some of the loose ends left by Captain Malboth, and I hope to pick up some loose ends of Captain Malboth and Dr. Maclean.

That is all, your Honor.

THE COURT: Hopefully we can close this out today, then.

MR. WAESCHE: We agree, your Honor.

MR. JULIANO: We will make progress, your Honor.

THE COURT: All right.

T R A N Q U I L L O C R I S T O F O R O M I L A N O, called as a witness by the defendant, being first duly sworn, testified as follows:

MR. DALY: Your Honor, I'm sorry to go back, but I meant to introduce the deposition of Herbert Banks, the last witness, as an exhibit.

He did appear on behalf of the defendants, and to the extent there are any inconsistencies in his testimony this would be the best evidence of it.

MR. JULIANO: I have an objection. The witness was here and testified. He had full advantage to cross-examine on the basis of what he stated before in his deposition.

I don't think it is proper.

MR. DALY: Well, it is a deposition of a party produced pursuant to notice, and--

THE COURT: This is an age-old question and I will tell you my usual reaction to it is this:

That when the witness is here, you have got his deposition; if there are any inconsistencies, he is available to you.

I'm going to exclude it.

MR. JULIANO: Thank you,your Honor.

MR. DALY: I just may add this. The one advantage of having the deposition available is that many things that do not appear important and are not important at the time the witness is being examined, if the deposition is not there, in later arguments and briefs, opportunity is given to speculate on certain areas that if resort is made to the deposition--

THE COURT: Yes, but, Mr. Daly, from the standpoint of trial counsel, it is unfair for you to submit a deposition which I then read in camera and Mr. Juliano has no opportunity to rehabilitate with respect to inconsistencies.

MR. JULIANO: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. JULIANO:

Q Mr. Milano--

MR. DALY: Note my objection, your Honor.

THE COURT: Noted.

Q Mr. Milano, where do you reside?

A 495 Taylor Avenue, in South Hackensack, New Jersey.

Q By whom are you employed presently?

A By Mobil Oil Corp.

Q Mr. Milano, how long have you been employed by Mobil Oil Corp.?

A About 29, 30 years.

Q In what capacity are you presently employed?

A As an AB tankerman.

Q Aboard what vessel?

A Aboard the Mobil Trader.

Q How long have you been employed aboard lthe Mobil Trader?

A I have been on the Mobil Trader since 1968.

Q When you joined the Mobil Trader, who was the master?

A Captain Herbert Banks.

Q On March 17, 1971, in what capacity were you employed aboard the Mobil Trader?

A As AB tankerman.

Q Did you have any certificates issued by the United States Coast Guard?

A Yes.

Q What certificate is that?

A The AB tankerman.

Q Do you have that certificate with you today?

A Yes, I do.

Q May I see it?

When was this certificate issued?

A Tankerman I believe was issued around 1947, and AB about 1949.

Q Is this a renewal or reissue or --

A No, that is the same.

Q What time on March 17th, 1971, did you start working?

A 0700.

Q What bunkering job did the Mobil Trader have on March 17th, 1971, when you started work?

A We had orders to bunker the Beaie Comeu.

Q At what time did you bunker the Beaie Comeu?

A I believe we started around 0930.

Q Where was that vessel located?

A Dikeman Street, in Brooklyn.

Q Do you recall finishing up on that job?

A Yes.

Q Where did you go after that?

A From Dikeman Street we went to Port Mobil.

Q What time did you arrive at Port Mobil?

A Arrived at Port Mobil around 1:40.

Q Did you have any orders at Port Mobil?

A Yes.

Q What orders were those?

A To load for the Trade Daring.

Q Do you know how much cargo?

A 375 tons was the order.

Q Of what?

A Of bonded marine diesel.

Q When did you receive orders for the Trade Daring?

A I received my orders from, for the Trade Daring, from the captain, Captain Banks.

Q What did you do if anything when you arrived at Port Mobil berth?

A I went ashore, on the shore phone, and I called the gauger foreman to verify the orders.

Q And did the orders verify or coincide?

A Yes, they did.

Q Is that normal practice at the berth?

A Yes.

Q Who was the gauger assigned to Mobil Trader at that time?

A Kelly.

Q Did there come a time when Kelly came back to the vessel at the berth?

A He came down to the vessel, yes.

Q Did there come a time when you started loading cargo for the Trade Daring?

A Yes.

Q Prior to the time you started loading cargo for the Trade Daring, what was the condition of the tanks before loading?

A The tanks were empty.

Q How do you know that?

A Because as I pumped them out, they were empty, and also we always have a blackboard in the galley that if there is any cargo in the tanks, it is marked on the blackboard.

Q What was the condition of the blackboard at that time?

A The blackboard was blank.

Q In what tanks was the cargo loaded?

A No.1 port, No. 3 port, and No. 3 starboard.

Q Do you recall when the loading of cargo started?

A About 1420, I believe.

Q Do you recall what time the loading ended?

A About 1520.

Q Did you take any temperatures during that period of loading?

A Yes.

Q And what temperature did you take, how many times did you take the temperature?

A I take the temperature as we begin to load, so that I can give the temperature to the captain, so he can figure out his ullages.

Q What was the temperature of the cargo at that time?

A 45°.

Q Did you take the temperature at the completion of loading?

A Yes. After I finished gauging the tanks, then we took the temperature again.

Q What was the temperature at that time?

A 45°.

Q How do you take a temperature on the Mobil Trader?

A We have a thermometer we put in the tank on a chain. We leave it in there for two, three minutes, then we pull it up, and we check the temperature.

Q How do you know how much cargo to put in each tank?

A I get the gauges from Captain Herbert Banks.

Q How do you get the gauges from Captain Banks?

A He writes them on the blackboard and then he comes out on deck and he writes them on the deck next to the

ullage pipe.

Q Did there come a time when you finished the loading of bunkers?

A Yes.

Q What did you do at that time?

A I gauged the tanks with the gauger Kelly and took the temperatures.

Q Is there any other procedure you follow before you gauge?

A Yes, we have to disconnect the hose and raise it up and pull it back midships.

Q Did you gauge out the tanks at this time?

A Yes.

Q What do you do with these gauge readings?

A As we gauge the tanks, Kelly and I, he writes them on a piece of paper, and then when we are all finished gauging, he brings them back aft to the captain and the two of them sit down at the table and they compare them.

Q What tanks were you gauging at that time?

A No. 1 port, No. 3 port and No. 3 starboard.

Q Did you gauge any other tanks?

A No.

Q Why didn't you gauge any other tanks?

A Because they were empty.

Q Did there come a time when you went to the galley with those figures with gauger Kelly?

A Yes.

Q And did there come a time when the barge report was made out in the galley?

A Yes.

Q After all of this was accomplished, what did the vessel do?

A We waited for delivery time.

Q And did there come a time when the Mobil Trader left Port Mobil and went to the Trade Daring?

A Yes.

Q What time was that, if you can recall?

A 1900.

Q Did you make fast to the Trade Daring?

A Yes, we made fast to the Trade Daring.

Q How did you make fast?

A Two lines forward and two lines aft.

Q Did there come a time when you made hose connections to the Trade Daring?

A Yes.

Q What time was that?

A 2220 about.

Q What do you have to do to make a hose connection? What did you have to do in ghis case to make the hose connections to the Trade Daring?

A Well, to make the hose connection to the Trade Daring I had to start my port pumping engine to activate my hydraulic system which operates my winch, my hydraulic winch, so that I can raise or lower the boom.

In this case, the Trade Daring was much higher, and I couldn't reach it with the boom, I had to raise it.

Q Once the boom is raised higher, how do you get the boom over to the vessel?

A I release the guyline on one side and I pulled it over to the ship with the other guyline.

Q Did you do this all by yourself?

A No, I have my ordinary seaman helping me.

Q Did he help you on this occasion?

A Yes.

Q How many hoses did you use in connection with this bunkering job on the Trade Daring?

A We had to use two hoses because I couldn't reach it with the one big hose.

Q How long is that big hose?

A That is a 6 inch hose, 30 feet long.

Q And what is the size of the other hose?

A That was a 4 inch hose, 12 feet long.

Q How did you make the connection between the two?

A I didn't make the connection. The Trade Daring crew made them.

Q Did you have to raise the other hose up on deck to the Trade Daring?

A Yes, I had to raise the 4 inch hose up to the deck of the Trade Daring.

Q Did there come a time when the connection was actually made?

A Yes.

Q What if anything did you do after the connection was made and everything is set and in position?

A Then I went back aft and I shut off my port pumping engine which I did not need any more and I started my starboard engine, pumping engine.

Q How is the hose supported on the boom?

A The hose is supported on the boom with block and fall to a strap around the hose.

Q I show you Trial Exhibit 33A, and photograph 15.

Is this a reasonable representation of a cargo hose on board the Mobil Trader?

A Yes.

Q Would you just point out for the Court the straps that hold the boom in place?

A The straps are wrapped around the house, this one is hooked, it has a cable hooked to it now, and these straps are wrapped around the hose, hooked to the block and fall.

Q Would you just label that, please "strap"?

(Witness marked)

Q Draw an arrow to that, would you please?

Thank you.

Now,do these straps have to be constantly attended or watched?

A Yes.

Q Would you tell the Court why?

A Because we are pumping, we are coming up, and the ship will either be going down or staying stationary and as we come up, the straps pull on the hose, and we have to keep lowering the hose to keep the slack in it.

Q Does this require someone on deck to watch this at all times?

A At all times.

Q Did there come a time when you started to pump to the Trade Daring?

A Yes.

Q About what time was this?

A Around 2250.

Q At what rate did you deliver bunkers to the Trade Daring?

A Well, we, generally we start off slow.

Q What did you do on this occasion?

A At all times, then we sped it up to 200 tons per hour, 1500 revs on my engine.

Q How long a period of time do you commence the bunkering at a slow pace?

A Well, when we start, we start at a thousand revolutions and we watch our pressure gauge to make sure that the lines are all set, that we do not have no back pressure, and when we are sure we don't have no back pressure and that the connections are not leaking, then is when we speed up.

Q Is that the procedure you followed on this occasion?

A On all occasions.

Q Did there come a time when you started to deliver at maximum speed?

A Yes.

Q For how long a period of time did you proceed at slow speed prior to commencing at faster rate, maximum

* * *

A It is considered a light product.

Q When you blow the line, what pressure do you develop on that pump?

A She is sucking air, maybe from zero to about four pounds, five pounds tops.

Q During the entire bunkering process did you see anyone permanently stationed at the bunkering manifold on the Trade Daring?

A I could not see the bunkering manifold but there was nobody at all in the vicinity that I could say that I saw.

MR. DALY: I move to strike the answer. I think the witness has disqualified himself from saying he could see anyone there. He said he could not see the bunkering manifold.

THE COURT: I will strike the answer.

Q How about in front-- how about at the railing, alongside the bunkering manifold, was anyone permanently stationed at that position?

A I have never seen anyone there.

Q During that entire pumping operation?

A During the entire pumping operation.

Q You have seen the cargo hose at all stages of operation, have you not?

* * *

Q That was the first pump you pumped?

A That is right.

Q And I believe you testified you finished No. 1 port in about 20 to 25 minutes?

A That is correct.

Q And the reason for that was you usually start off pumping slowly, is that correct?

A That is correct.

Q How many tons were in No. 1 port?

A I'd have to see her delivery receipt. And I also need my glasses.

The delivery receipt does not give me tons, it just gives me gallons, 7,641 gallons.

Q Can you convert that roughly into tons?

A I couldn't. I'd have to have the API and all that which I do not do.

Q Just roughly, how many tons would involve that number of gallons?

A Let's see now, 1009, 42 -- I'd have to have a piece of paper and pencil and then I could give you something close.

Q Oh, sure. (Handing)

A Roughly I'd say about 25, 26 tons.

Q So you had to start off approximately 25.6 tons?

THE COURT: He said 25 or 26.

MR. DALY: 25.6.

THE COURT: No, 25 or 26.

A 25 or 26 tons, approximately.

Q Now, how many tons did you have loaded for the Trade Daring in No. 3 port and No. 3 starboard?

A I will have to give you an approximation again.

THE COURT: I would have thought, gentlemen, that this all could have been worked out mathematically and stipulated to.

MR. JULIANO: I think it's already been testified to in his deposition, your Honor.

MR. DALY: I didn't realize it would take the witness that long, your Honor.

Q Well,perhaps we can shortcut that a little bit, Mr. Milano, if you are having difficulty.

A I will have it in a minute, approximaely, now. I'd say roughly about 36,5, if I'm correct. That is gross.

Q You mean in both tanks?

A Between both tanks.

Q Well, how many tons did you start out with? You do have that indicated there, do you not, the total number of tons loaded?

A 375.

Q 375. So if you had approximately 26 in the port No. 1, you would have a total of about 349 in the port and starboard tanks combined?

A Approximately, I would say, yes.

Q What is the maximum rate at which you can discharge in terms of tons per hour?

A 200 maximum.

Q 200 tons per hour.

Now, discharging at that rate of 200 tons per hour, and forgetting about the time that might be taken up in stripping and changing over your valving and so forth, just to discharge 349 tons at the rate of 200 tons per hour, how long would that take?

A Well, under the condition of the Trade Daring, I'd say an hour and 45 minutes, an hour and 40 minutes.

Q An hour and 45 minutes.

Now you started bunkering by discharging the No. 1 port at 2250 hours. It took you 20 to 25 minutes, let's say 20 minutes, for present purposes, that would bring you up to 2310; would that be approximately right, assuming it took you 20 minutes?

A Right.

Q And assuming, too, that you were discharging

the balance of these 349 tons at the maximum rate, and forgetting entirely about the time taken up in stripping, if you added that hour and 45 minutes to 2310, would that bring you to 0055?

A According to what you have there, yes.

Q Do you have any reason to disagree with that?

A Yes, because we finished at 0045.

Q You recognize, do you not, that when I added these times to come up with 0055, I did not include time lost in stripping.

How long does it take ordinarily to strip a tank?

A About two, three minuts, tops.

Q How many tanks did you strip or strip separately in the course of discharging all three of these tanks that had been loaded?

A I stripped the three separately, but No. 3 starboard I didn't have to slow down for that.

Q Thatis because you had given the Mobil Trader a slight port list by stopping when you reached about 500 barrels in each?

A That is correct.

Q And then you started discharging solely with the big suction the No. 3 starboard, and then when you

got down to the point where you might have been drawing a little air with the big suction in No. 3, you opened up No. 3 port almost all the way so you were both stripping and discharging port No. 3 simultaneously, is that right?

A I did not open No. 3 port all the way. I opened it about four or five turns just to feed the pump.

Q I see. Then after you finished stripping No. 3 starboard-- well, how long did stripping No. 3 starboard take?

A That does not take long, a minute or two.

Q About two minutes?

A Feeding from No. 3 port, yes.

Q And then after you completed stripping No. 3 starboard, then you opened up 3 port all the way?

A That is right.

Q Later in the morning of the fire, you were interviewed by Mr. White of Mobil's legal department, were you not?

A I don't remember that.

Q You don't remember that?

A No.

Q Do you recall you testified in this case by deposition in November last year, you attended at the

office of counsel for the plaintiffs and testified; do you recall testifying?

A Yes.

Q Referring to page 42 of the transcript, beginning at line 17:

"Q On March 18, did you at any time have any conversation with Mr. White from the legal department of Mobil's New York office?

"A Yes."

Do you remember giving that answer?

A Well, I spoke to Mr. White, but he was speaking mostly with Captain Herbert Banks, and I was just there occasionally.

Q Well, did you just testify a moment ago that you did not remember speaking to Mr. White?

THE COURT: You used the word "interview." "Speaking" and "interview" are two different things.

Do you remember being interviewed by him?

THE WITNESS: No, I do not remember.

THE COURT: Do you remember talking to him?

THE WITNESS: Occasionally, yes.

THE COURT: On the same occasion when he was talking to Captain Banks?

THE WITNESS: Well, as I was going in, he was

talking more or less with Captain Banks, and I might have said something which I do not remember.

THE COURT: All right.

Q You don't recall Mr. White even asking you your name in the course of his presence on the Mobil Trader on March 18th?

A No.

Q You don't recall if he asked you your age?

A No, I don't.

Q At that time how old were you, Mr. Milano?

A I will be 59 this year; going back four years, I'd be 55.

Q Was your home address at that time 495 Taylor Avenue, South Hackensack, New Jersey?

A That is right.

Q Was your telephone number at that time Area Code 201-343-5033?

A That is right.

Q Do you recall him asking you how long you had gone to sea?

A No, I don't.

Q Had you been going to sea since 1944?

A I worked ashore in a tank cleaning plant for ten years.

Q Had you been going to sea since 1944, though?

A I have been working on boats from 1944 to 1960, and from 1962 to the present.

Q Do you recall him asking you whether you worked for the cleaning farm?

A No, I don't.

Q Had you worked for the cleaning farm from 1952 through 1962?

A Yes.

Q Do you recall him asking you when you had come on board the Mobil Trader for that week's shift?

A No, I don't.

Q Do you recall when you did come on board the Mobil Trader for that week's shift now; do you recall that now?

A Yes.

Q Was it on a Monday?

A It was on a Monday. Our week starts Monday.

Q Would that normally have been the starting time of 900 hours, 0900 hours?

A No.

Q 0700 hours?

A We started that date 0700 hours.

Q Did he ask you how many hoses, if you recall,

were used to reach the deck of the Trade Daring from the Mobil Trader?

A No, I do not.

Q Did you use two hoses?

A Yes, I used two hoses.

Q Do you recall him asking you whether one hose was a four inch hose about 12 feet long?

A No, I don't.

Q Was one hose about 12 feet long?

A The four inch hose that I used, yes.

Q Did you also use one six inch hose, 10 feet long?

A Yes.

Q And the two hoses were connected together?

A Yes.

Q And that was by the Trade Daring's crew, is that correct?

A That is correct.

Q When you first came alongside the Trade Daring for bunkering purposes on March 17, do you recall what time that was?

A 1920, I believe.

Q Did you have any conversations with any of the engineering personnel on the Trade Daring?

A No.

Q At no time?

A Before we hooked up the hoses, later on.

Q What was the first conversation you had, what was that about, the first conversation you had with personnel of the Trade Daring?

A I asked them if they could take that 200 tons per hour and that we had about 375 long tons for them.

Q Did the engineer of the Trade Daring ask you how fast you could pump?

A Yes, he did.

Q What if anything did this engineer say to you then?

A He agreed to 200 tons per hour.

Q You mean he just answered back, O.K., at that time?

A Yes, he said it was all right.

Q Do you recall telling anyone, Mr. White, in particular, that the engineer you spoke to after you told him you could deliver 200 tons per hour, that he went away for about five minutes, then came back; do you recall that?

A No, I don't.

Q You finally received orders to pump, I assume, and when was this first order given?

A About 2250.

Q Was that order given by the same man who had asked you how fast you could pump?

A I wouldn't know.

Q Do you recall speaking to Mr. White about the individual who gave you the orders to pump?

A No, I don't.

Q I believe, according to the delivery receipt, you had approximately 7000 gallons in the forward, that is No. 1 port tank, is that correct?

A That is correct.

Q Did that give the vessel a small list to port?

A If any, it would be very slight.

Q With particular reference to the stripping operation of No. 1 port, how long did that take you?

A About 20, 25 minutes.

Q The actual stripping itself?

A The actual stripping? About the same as the others, about two minutes.

Q Then I understand after stripping No. 1 port, you opened up both port and starboard No. 3?

A That is right.

Q And you continued pumping out port and starboard No. 3 until you had about 500 barrels in each of the

tanks, is that correct?

A That is correct.

Q How long did it take you to get down to that point where you had 500 barrels in each tank?

A I wouldn't know.

Q 500 barrels, that is about approximately 70 tons?

A I would say so.

Q How many revolutions were you getting on the pump or the engine as you were discharging No. 1 port before you started stripping; was that 1500, the maximum?

A 1500, right.

Q Then when you got down to the point of stripping, you would decrease it to about 1000, is that correct?

A 1000 revolutions.

Q Where is the stripping line within the tank of No. 3 port, that is, what area does it draw from in the tank?

A It is right in the corner, midships, aft. It is aft of the big suction. They are both to the after end of the tank midships.

Q The after end of the tank midships?

A Right.

Q You are referring to midships, you are referring

* * *

Q I wanted to know from inside the tank, where does your small suction pipe draw from within the tank?

A It draws from the corner back aft, midships.

Q That would be in the lower right-hand corner of No. 3 port if you are looking at it from, say, an overhead view?

A Right, where you have your finger.

Q You say giving the barge a list to port would help in stripping No. 3 starboard?

A That is correct.

Q After closing No. 3 starboard stripping valve, you continued to pump No. 3 port to discharge the remainder of the 500 barrels that you had in No. 3 port before you started stripping No. 3 starboard.

In other words, whatever you had left in No. 3 port after you finished stripping No. 3 starboard, you started pumping the rest out, right?

A Right.

Q At the time you started pumping full from No. 3 port, approximately how many barrels did you have at that time in No. 3 port?

A Must have pumped at least 25 barrels, maybe between 450, 475.

Q 475 barrels. Approximately how many tons would

that be?

A 650, 650 barrels -- wait a minute -- about 60.

Q About 60 tons. And how long would it take you to pump 60 tons, assuming the pump is going at maximum revolutions?

A Between 10 and 15 minutes.

Q Would it be closer to 20 minutes?

A Yes.

Q Now, there finally arrived a point where you started stripping No. 3 port.

Would you describe this stripping operation for us?

THE COURT: We have had it described several times, Mr. Daly. Let's not go through it again.

Q When did you start stripping No. 3 starboard; do you have any recollection of that?

A No, I wouldn't.

Q Do you recall ever telling Mr. White that you started stripping the tanks,first the starboard and then the port at 0045 hours?

A No, I do not.

Q Do you deny that you did tell him that?

MR. JULIANO: I'm going to object. That is argumentative.

MR. DALY: I simply want to know whether it is a matter of a clear recollection --

THE COURT: He can't deny anything if he doesn't remember.

Q Well, just assuming now, on the basis of another exhibit in evidence, that stripping of the starboard and port No. 3 was commenced at 0045 hours, would it be correct that when you started stripping No. 3 starboard, you still had a considerable amount of No. 3 port still to pump, isn't that so, before you would start stripping No. 2 port?

A Yes, I would have some cargo left in No. 3 port, yes.

Q How long would it take you from the time you started stripping No. 3 starboard until the time you, or how long did it take you from the time you started stripping No. 3 starboard until you concluded stripping No. 3 port?

A I have no idea because I never looked at the time.

Q Approximately how long would it take you, based on the fact, let us assume, that you were using the engine and the pumps at the maximum speed?

A About 15 minutes, the most.

Q So if you started at 0045 hours, just on that assumption which I believe you do not accept, but if you started stripping No. 3 starboard at 0045 hours, and then followed that procedure you described, you would complete the stripping of both tanks by about one o'clock?

A At what time started?

Q If you started at 0045 hours and it took you about 15 minutes from the time you started stripping No. 3 starboard until the time you concluded stripping No. 3 port, I think you said it would take 15 minutes, is that correct?

A It would take 15 minutes, but we were finished at 0045.

Q After the pumping started, and between that time and the time the fire was first observed by you, how many conversations did you have?

MR. JULIANO: Objection, your Honor.

There is no testimony that this witness ever observed the fire.

THE COURT: Sustained.

Q Did you ever see a fireball come out of the Trade Daring?

A Not until we got bak to Port Mobil.

Q Well, that might cover a longer time than I

intended, but in any event, after you started pumping, how many conversations did you have with the personnel of the Trade Daring?

A I had one with the person who I assumed was the master of the ship, and I have had two discussions woth somebody on deck before pumping. That is about it, I guess.

Q Where was the master when you saw him? Where was he standing?

A He was one deck above the main deck on the after end of the pilot house, in the corner of the railing.

Q Do you ever remember seeing him on the main deck?

A No, I don't.

Q What was this first conversation about between you and the master?

A He was asking me if I could pump faster.

Q Do you recall about what time that was?

A I believe that was about 0015 or 20, something like that.

Q Then did you have another conversation with the master after that?

A I don't remember.

Q Well, did there come a time when the master

told you to stop pumping?

A Yes.

Q Do you recall what time that was?

A I figure it was around 0042.

Q 0042. That is the first time you were told to stop pumping, about 0042?

A That was the only time.

Q Did you have any other conversations with the master after that conversation concening pumping or stopping the pumping?

A When he told me to stop, I had already closed the stripping valve on port No. 3, and I told him that I was already finished and I was going over to release the clutch on the pump.

Q And then did you go over and release the pump clutch?

A Yes, immediately, as far as I could.

Q Did you also close off a deck valve at that time?

A No, I stopped my pump.

Q When the master told you to stoppumping or someone-- do you know that he was the master?

A No, I just assumed that he was.

Q Did he just say, "Stop pumping," or did he

make any signs or anything; what did he do?

A He just told me to stop.

Q Did he make any sign to you?

A Not that I know of.

Q At the time you say the captain told you to stop pumping, was there anyone else on deck of the Trade Daring?

A At the time he told me to stop, that was after he had his conversation with this man that come from back aft, and then he left and went back aft again, and the captain was alone I believe when he told me to stop.

Q Was the captain, if you noticed, on this deck above the main deck,was he there throughout the period while you were bunkering, if you noticed?

A I wouldn't say throughout the whole bunkering, but from the time that he asked me to speed up, I believe that he was there at all times. I'm not sure, because everytime I looked up, he was there.

Q Do you recall the master giving you any sign at any time to stop pumping or anyone else giving you any sign to stop pumping?

THE COURT: Repetitious, Mr. Daly.

A No one.

Q No one.

Did you ever tell Mr. White that the master gave you a sign to stop the pump?

A I don't remember.

Q Have you read Mr. Mr. White's report?

A Yes.

Q Did you see this language in the report, reading from page 5:

"At 0045 hours Milano began stripping the tanks, first the starboard and then the port, and started blowing the line."

Do you remember making that statement to him?

A No, I don't remember making that statement.

Q I believe you stated that you advised the master, that is, Captain Banks-- I should refer to Captain Banks-- at some point in time that you had completed bunkering.

What did you say to the master, or what did you say to Captain Banks? How did you tell him that you had stopped bunkering?

A I generally holler up "Clean Delivery."

Q You generally holler up "Clean Delivery." Did you holler up "Clean Delivery" on this occasion?

A I believe so, yes.

Q And you didn't say anything else, just "Clean Delivery"?

A That is all.

Q You didn't tell him you were blowing the line?

A No, I did not.

Q Was Captain Banks asleep when you called him?

A No.

Q Do you recall reading in Mr. White's report, and I'm again quoting from the report, and this time,at page 5:

"He then went into the wheelhouse and woke Captain Banks and told him that the delivery had been completed."

Do you remember reading that statement in the report?

A No, I don't.

Q You don't remember reading this statement in the report?

A No, I don't.

Q Do you remember telling Mr. White that you woke Captain Banks?

A No, I don't remember.

Q Do you remember going into the wheelhouse to awake Captain Banks?

A No.

Q After you called Captain Banks, when did you

next see Captain Banks, after you called him?

A After I started port engine and started to go forward to get the ladder.

Q You next saw Captain Banks after you went to start the port engine?

A After I had started it.

Q Have you read your deposition, the deposition that you gave last year in this case?

A I've read it once, yes. Twice.

Q Do you recall mentioning starting this pump engine at any time in the course of that deposition?

MR. JULIANO: I'm going to object, your Honor. I think the proper question would be, whether you asked whether or not that engine was started.

THE COURT: Yes. Sustained.

Q I believe you described before on direct examination how from time to time it was necessary to raise the boom that held the hose that was carrying the bunkers to the Trade Daring.

When did you first turn on the pump to raise the boom that carried the hose leading to the trade Daring, when is the first time that day since you started the bunkering that you turned on that port pump?

A When we were alongside the Trade Daring; when

they were ready to make the connections, around 2220.

Q And you turned on the pump at that time?

A Not the pump. The pumping engine.

Q You turned on the engine?

A That is correct.

Q And from to time thereafter you had to use the hose, the gear, to lift the boom as the Mobil Trader rose in the water, as her cargo was being discharged?

MR. JULIANO: Objection. That is not the testimony. The testimony is that --

THE COURT: I sustain the objection.

Q What did you use the port engine for in connection with the boom that you were using to lift the hose on the Trade Daring?

THE COURT: Been asked and answered.

Q After raising the boom to the Trade Daring, did you turn off the pump?

THE COURT: Turn off the engine.

Q Turn off the engine.

A I did not turn it off until all the connections were made.

Q And when was that?

A I'd say about 2245, just before we started to get ready to pump.

* * *

shut off the pump engine?

A I shut the pump engine off after I shut the pump.

Q How long was that after you called Captain Banks?

A About a minute and a half, I would say.

Q When he came down, you and he went over to put up this ladder on the Trade Daring?

A That's right.

Q And you recall his going up the ladder, do you?

A Yes.

Q And you remember clearly that he took a line and made some connection with the ship's rail to fasten the ladder or secure the ladder,is that correct?

A He passes it around the rail, thrcugh the bottom, and sends the bitter end back down to me on deck and I made it fast to the second or third rung of the ladder.

Q And you recall that quite distinctly, doing that, is that correct?

A Yes.

Q Where did you get the ladder from?

A On the bow, just forward of the hatch of No. 1 tank.

jk:mg 188 Milano-cross

Q There came a time when Captain Banks went on the deck of the Trade Daring, is that so?

A Yes.

Q How long after he went on the deck of the Trade Daring was it that you next saw him?

A I'd say two, three minutes.

Q Where wereyou at the time you next saw Captain Banks?

A I was on my way walking to the stern.

Q How far away were you from Captain Banks when you saw him for the first time?

A When he returned from the ship?

Q Yes.

A I'd say it was almost opposite the starboard pumping engine.

Q How far away would that be?

A 50 feet.

Q As a matter of fact, isn't it so that you were just walking back from the ladder and you thought maybe you walked about 30 or 40 feet and Captain Banks was right down behind you, isn't that so?

A I would say so, yes.

Q What time was the fire?

A I have no idea. Captain Banks came down and

told me that the ship was on fire.

Q How long did it take you to start up the main engines?

A Take about a minute.

Q Is that how long it took you?

A I would say so, yes.

Q I assume you have seen this before, Mr. Milano. It is Exhibit 26, the Mobil tanker manual?

A Yes.

Q Are you familiar with that booklet?

A Yes, we have one on board.

Q Are you familiar with Rule 6210 which I will read you, Transfer Signals:

"Before cargo transfer operations are begun, agreement must be reached with terminal personnel regarding signals to be used for slowing down the transfer rate, emergency stop, et cetera. This is of particular importance in ports where a language problem exists."

Are you familiar with that regulation?

A Yes.

Q Did you undertake to establish any signals with the crew of the Trade Daring?

MR.JULIANO: I'm going to object, your Honor. I don't think this paragraph has anything to do with a

signal between the vessel and Milano. This has to do with terminal personnel and not with that.

THE COURT: I will sustain it.

Is that manual an exhibit?

MR. DALY: Yes, it is, Exhibit 26.

MR. JULIANO: Yes, your Honor, Exhibit 26.

Q Mr. Milano, are you familiar with Rule 4512 of the manual?

MR. JULIANO: What page is that on?

MR. DALY: That is on page 30.

Q "Barge loading or discharging."

"When loading from or discharging into barges, the same precautions shall apply as when at a berth. The officer in charge shall refuse to transfer or receive cargo under conditions which would endanger his vessel."

Are you familiar with that regulation?

A Yes.

Q Do you understand that the same rules apply to Mobil personnel whether they are on shore stations or whether they are on barges, bunkering vessels; they have the same duties?

A Yes.

Q Thank you.

And did you arrange signals with the ship's

crew before bunkering?

THE COURT: There is no requirement that he do it.

MR. DALY: I believe the import--

THE COURT: I don't see the connection, one with the other.

MR.DALY: I believe the import of this regulation--

THE COURT: That is your interpretation of it, but it is not mine.

Q Do you consider it one of your oblgiations to arrange transfer of signals with the vessel you are bunkering?

A No.

Q At 0045 hours was there anyone of the Mobil Trader on the deck besides yourself?

A Captain Banks.

Q That is at 0045 hours, on deck; was he on deck at that time?

A I would say so, yes.

Q Didn't you state before, and in fact testified at various times, that at 0045 hours when you called him, he was in the wheelhouse?

MR. JULIANO: That is not the testimony, your Honor. I object.

THE COURT: Where was he at 0045 hours?

THE WITNESS: I would say he had just come out from the house after having finished making his barge report or delivery receipt.

Q When had you called him?

A I called him when I had stripped No. 3 port. It would have been about 0042.

Q You say you called him at 0042, is that correct?

A Yes.

Q And he came down about a minute later after you called him?

A I'd say about two or three minutes later.

Q About two or three minutes later?

A Right.

Q Have you read Captain Banks' deposition?

A No, I did not.

Q Have you discussed Captain Banks' testimony with him, after he completed testifying today?

A No, I did not.

Q Are you familiar with this rule in the tanker manual, Exhibit 26, Rule 6216, page 58:

"Loading rates. Loading is to be started slowly until it is determined that the cargo system is operating normally. The loading rate shall then be

increased to the safe maximum."

Are you familiar with that portion of the rule I just read?

A Yes.

Q And that is what you did or tried to do when you started transferring bunkers to the Trade Daring, is that so?

A Yes.

Q Let me continue the second paragraph of that rule:

"Cargo is to be loaded at maximum rates consistent with considerations of safety, the condition of the vessel's pipeline system, and the ability of the ship's personnel to ahndle loading rate without undue risk of overflow."

Are you familiar with that portion of the rule? Are you familiar with that part of the regulation?

A Yes.

Q And did you try to carry that out in bunkering the Trade Daring?

A I didn't get you.

Q Did you try to carry out that rule when you were bunkering the Trade Daring?

A No, I would say it was up to the Trade Daring to

let me know what shape their pipeline is in, and if they cannot take it at that capacity, then they should slow me down.

Q Well, let me read the final paragraph of that rule.

"The loading rate is to be reduced as necessary when topping off tanks in order to permit completion of loading without risk of overflow."

Are you familiar with that portion of the rule?

A Yes.

Q When the Trade Daring ordered 375 bunkers, did you consider that that was probably just a topping off operation?

A Yes, it is a possibility that it would be.

Q Is there a rule or regulation in this tanker manual, if you know, which advises Mobil personnel against shutting out cargo unnecessarily?

A Dong what?

Q Against shutting out cargo unnecessarily? Are you advised to try to avoid shut-outs of cargo?

THE COURT: This has nothing to do with this case, Mr. Daly. There is no shut-out here.

Q After the fire and the Mobil Trader left the Trade Daring, you went to Port Mobil, I believe, and then

* * *

MR. DALY: If your Honor will bear with me, I just want to consult with my associates.

(Pause)

MR. DALY: I have no further questions.

I would ask that the deposition of the defendant Mobil Oil Corp. by Mr. Milano be received as an exhibit.

It is a deposition not merely of a witness,but he was produced as a defendant.

I believe it constitutes admissions which are always admissible in evidence.

MR. JULIANO: I raise the same objection, your Honor, as I did with the deposition of Captain Banks.

THE COURT: I'm going to sustain the objection.

MR. DALY: I have no further questions.

REDIRECT EXAMINATION

BY MR. JULIANO:

Q Mr.Milano, this figure of 200 tons that Mr. Daly was referring to, that is about 200 tons, is that correct?

A Approximately, yes.

Q It could be more, it could be less?

A It wouldn't be more.

Q You testified getting away from the Trade Daring you had to swing the boom over, correct?

A Correct.

Q Is there anything else you have to do with that boom once it is swung over midships?

A Made fast.

Q Anything else you have to do with it?

A Lower it.

Q What do you have to use to lower it?

A My port engine.

Q After you use your port engine, what do you do with it?

A I shut it off.

Q On the next day you had a job on the Pula, is that correct?

A I'd have to see the logbook.

Q Does this refresh your recollection, Exhibit 60?

A Yes, Erie Basin, yes.

Q That was on the 18th, is that correct?

A That is correct.

Q What did you have to do over at Erie Basin when the Pula was alongside?

A We had to go alongside, and make fast to her.

Q Did you have to work?

A Yes.

Q Did you work during the entire time?

A Yes.

Q That was the time that Mr. White came aboard?

A I believe so.

Q I forgot, you don't remember Mr. White.

A No.

MR. JULIANO: I have no other questions.

RECROSS-EXAMINATION

BY MR. DALY:

Q Mr. Juliano has mentioned again the raising, raising the boom.

Have you ever mentioned the raising of this boom to anyone and use of the prot engine to raise the boom before the pilot's testimony, Cesare Del Greco, was taken?

MR. JULIANO: I object.

THE COURT: Sustained.

MR. JULIANO: Thank you, Mr. Milano.

(Witness excused)

MR. JULIANO: Your Honor, the defendant rests.

THE COURT: Mr. Daly.

MR. DALY: Your Honor, I would like to present a rebuttal witness, as I mentioned Mr. Argyriadis. He will not take very long, at least on my direct. There are many loose ends -- well, not that many -- there are loose ends to pick up. I would like the induglence of about

five or ten minutes to do that.

THE COURT: Granted, on your promise that he is not going to take very long.

MR. DALY: Yes, your Honor.

THE COURT: All right. Short recess.

(Recess)

MR. DALY: Mr. Argyriadis.

D O R O S A. A R G Y R I A D I S, called as a rebuttal witness, having been previously duly sworn, testified as follows:

THE CLERK: You are reminded you are still under oath in this matter.

DIRECT EXAMINATION

BY MR. DALY:

Q Mr. Argyriadis, I show you Exhibit 59, which was identified by Captain Halboth, and I believe you can see what appears to be the connection of a vent line and a save-oil drain.

Do you see what appears to be that on the sketch?

A Yes, sir.

Q I believe Captain Halboth testified that it was on an order of magnitude of about 12 feet above the lower level or the bottom plating of the engine room; did you

hear that testimony?

A Yes, I recall that testimony.

Q Is there any vent line that passes up that way to a point even approximately 12 feet from the save-oil drain?

MR. WAESCHE: Objection, your Honor. Captain Halboth made it quite clear that his diagram was merely schematic, did not indicate how a line ran.

MR. DALY: He did say it was about 12 feet above.

MR. WAESCHE: That is true.

THE COURT: That is true.

Q Is there any vent line in that area?

THE COURT: In what area, that is the point.

Q That would appear with a drain line--

THE COURT: Ask him if he saw a vent line connected with a save-oil drain 12 feet above the level of the engine room anywhere in the engine room.

A The answer is absolutely not.

THE COURT: All right.

Q I show you Exhibit 34, and ask you if this depicts the vent lines of the Trade Daring?

A Yes, it does.

Q Where do those vent lines run, particularly the

vent lines from the double bottom tank; would you describe how they run?

A Well, I presume you refer to the double bottom tanks being the overflow tanks?

Q Yes.

A They run underneath the so-called operating platform of lower level of the engine room. They run aft and they run either to port or starboard to the side shell of the vessel and then from the side shell, they go up to the poop deck or above the poopdeck as the case may be.

Q They do not rise up through the center of the engine room, do they?

A They certainly do not.

Q They run under the floor plating to theport or starboard as the case may be, is that correct?

A They run to port or starboard, they run aft, aft of the tanks of the vessel, and then they rise on the side sheel of the vessel to the poop deck level. They are practically licking the side shell of the vessel.

Q Standing at or about the mid-line or center line of the vessel at the floor plating level, could you see any vent lines?

A You could if you knew where they were and you looked to the left or right and aft you would be able to

see them at the side shell or you may be, depending on how much machinery was there at the exact point you were standing at.

Q Would you be able to trace those vent lines into the double bottom overflow tanks without going below the floor plating?

A At what particular time, sir?

Q At the time you were on board the vessel on April 1, 1971?

A No, sir.

Q What was the condition of the vessel at that time?

A She was in a mess.

Q Would you be a little more precise; how messy was she?

A There was oil and water at the forward end of the engine room, at the very best three inches below the floor plates. She was leaking, the heavy fuel tank on the port side had a crack, had leaked all the oil in the bilges. Right aft of the port ladder which was quite badly damaged and dangerous in effect to go down, about six feet abaft of that was where the oil and water was above the floor plate level in itself. You would not be able to go aft. The ship was slightly listed to starboard. The oil and water on the starboard side was at the

mid-point of the separators and you couldn't go aft from that point, unless you wore, you know, fishing boots or something like that, and you wanted to take a chance.

The floor plates at that point were all twisted, they were-- many of them were not in position.

In general, the ship was burned out. The engine room was burned out. It was dirty all over the place. It would have been very, very difficult to do, to see anything, impossible to see anything below the floor plate level.

Q By reference to Exhibit 34, could you trace for us-- first describe by name or number, and then trace for us the vent lines leading from the double bottom overflow tanks.

A Yes.

On the cross-section that shows frame 43, which is looking from stern towards forward, you have on the starboard side the vent line by No. 1833, which is the heavy fuel vent line of the heavy fuel overflow tank, and then you have the vent line 670 on the port side shown here, which is the vent line of the diesel oil overflow tank.

Q Could you just draw an arrow pointing to that particular line you were describing? Is that 670?

A That is 670, I believe, yes.

Can I make sure that this is the line? I have to look at this view. Yes, the 670 is the line that is leading from the overflow diesel oil tank, the vent line.

May I also mark it on the plan view of it.

Q Would you put your initials next to that arrow, D.A.?

A Right.

(Witness marked)

Q Now, I believe Captain Halboth mentioned opening the sounding tubes and determining that there was a press of oil on the double bottom tanks.

A I recall that, sir, yes, I recall his testimony to that effect.

Q On what level would one have to be standing on to do that?

A That would be above the floor plate level.

Q How far below the floor plate level, vertical distance, do these vent lines run, approximately?

A I do not think that this is a correct representation of the height of the vent lines. My recollection is that they were about two and a half feet or so below.

Q But below the floor plate level?

A The so-called floor plates, right, sir.

MR. WAESCHE: May the record indicate when the witness referred to this not being an accurate representation, he was referring to Exhibit 34?

THE COURT: Yes.

A It is not an accurate representation as to the exact height of the lines above the tank top or below the so-called floor plate level.

Q But they do follow this course you have indicated, that is, running parallel and below the floor plate level, until they reach almost the skin of the ship, and then they head up toward above decks, is that correct?

A They run across, then they run aft, and then they run over, so as to avoid the tanks.

Q Are there any married vents which perhaps someone who isn't a naval architect might mistake for the marriage of a vent and an oil line on the Trade Daring?

A Yes, there is. There is one that I have been pondering about, if that may have been the misconception that we have been hearing about in this courtroom.

Q Where is that located?

A That is-- there is a vent line from the low sea chest to the high sea chest, and I am pointing to

No. 229 of the port side elevation of Exhibit 34, and the sea chest in itself to a non-familiar person may look like a small tank, and there was definitely a marrying of two vent lines from the lower and upper sea chest, both of them getting together at a certain height above the floor plates.

Whether that was eight or ten or twelve or fifteen feet, I don't recall. And leading in one common line then to the poop deck level.

Q These were both vent lines,were they not?

A Those were both vent lines.

Q Would you encircle that particular portion of Exhibit 34 where you described a connection of two vent lines that perhaps a layman might confuse with the marriage of a vent line and a save-oil line.

(Witness marked)

THE WITNESS: I have, in red, sir.

Q You have in red.

Would you also put your initials D.A. hext to that, sir?

(Witness marked)

THE COURT: I'm sure the captain would object to the characterization.

Q Captain Halboth was presented with this

photograph marked Exhibit 4, and identified a sight glass circled in green.

Can you identify what piping that sight glass is in?

A Yes, sir, that is the overflow from the port settling tank.

Q Would you agree with his testimony that that is approximately eye level above the bottom plating or the floor plating?

A I think it is about seven feet or so. It is approximately eye level, yes, sir.

Q And running next to that line, to the left of it, do you recognize that line?

A Yes, it appears to be a save-oil line.

Q And that would be certainly as it is passing this sight glass, it certainly is not 12 feet above the floor plating, is it?

A No, itis not.

Q Actually it appears to run down parallel to the, this overflow pipe to a height of, as clearly as you can see on this photograph, approximately what height above?

A That should be about a foot to two feet above the floor plate level.

Q So at that point you apparently still have a

save-oil line?

A You do, yes.

Q Mr. Argyriadis, you have designed approximately how many ships?

MR. WAESCHE: Your Honor, I object to this.

THE COURT: Yes, this is not proper.

He has gone through this before.

MR. DALY: I'm just leading to the next question.

THE COURT: Let's get to the next question, because you have got another five minutes, about.

MR. DALY: All right.

Q Mr. Argyriadis, did you calculate the area in the engine room below the bilges?

A Yes, sir, I did.

Q What did you use as the basis of your calculation, what particular plans?

A I have used a big engine room layout drawing which I believe is an exhibit. I don't know the number.

Q 15 and 16.

A That is the one I have used for my calculations.

Q That very large exhibit?

A Yes, sir.

Q What did you calculate the area to be?

A Just over 2000 square feet, sir.

Q What is the shape of that area?

A It is a trapezoid, practically a complete triangle. It is a trapezoid actually diminishing very rapidly at the after end of the vessel.

Q In making that calculation, did you take into account the location of any islands of machinery on that level?

A Primarily the main engine since the main engine is sitting on a sump tank basin where the lubricants are and is completely isolated from the bilges; that I have subtracted.

I have also taken, I believe, a 5% overall deduction for different scantling members, structural members, in other words, and supports of other machinery.

Q Mr. Argyriadis, I won't go into any detail,but I'm sure you heard Dr. Maclean make reference to the fact that ullages in the side bunker tanks as found by Captain Halboth on his inspection long after the fire, the levels were somewhat below the overflow pipelines.

Taking into account that the vessel and its tanks have been involved in a fire, what in your opinion would explain this differential between the level of the bunkers and the overflow lines?

A The heat of the fuel oil in the tanks from the fire.

Q Did you calculate what temperature would be necessary to bring about this expansion and then subsequent shrinkage?

A The volumetric expansion is quite small, but would require on the port side tank I believe 95 degrees Fahrenheit, average temperature of the fuel, and on the starboard side tank, 85 degrees Fahrenheit.

Q In other words, if those tanks were heated up to those tempe-atures, that would explain the expansion and then shrinkage as evide ed in the ullages after the fire?

A That differential temperature I should explain is from 45 degrees which was the figure given as the temperature when the fuel was loaded on the Trade Daring, up until, I mean that is the basic figure I have used.

Q You have heard Captain Neal's testimony in which he made some criticism of the location of the emergency diesel generator.

Have you any response to that?

A Yes, I don't think the cricism is fair. The location of the diesel generator and the equipment on it is absolutely proper. I know many vessels that have the

emergency diesel generator located in that area. I know a number of other vessels that don't have them located in that area. But it is a matter of design and it is a matter of being equally satisfactory if the equipment is readily accessible and is outside the engine room.

Q In designing vessles, you also design the bunker systems, do you not?

MR. WAESCHE: Objection, your Honor.

THE COURT: Sustained.

Q You have heard some criticism of the personnel of the Trade Daring by Captain Maclean in that he thought that personnel should be monitoring the tanks in the engine room.

Taking as a fact that the man on the deck had the manhole open and was monitoring the levels of the tanks as the bunkers were rising in the port and starboard side tanks, would there be any necessity to have someone down in the engine room looking at tanks that were not being filled?

MR. WAESCHE: Objection, your Honor.

THE COURT: Sustained.

Q There was one suggestion that perhaps the incoming bunkers could have been routed to the forward deep tanks at the time overflow was noted.

Would you regard that in your opinion as a practical way of trying to deal with the situation of overflow of bunkers?

MR. WAESCHE: Again, I object, your Honor.

THE COURT: I'm going to sustain it.

Q What would be required in order to reroute the bunkers, incoming bunkers being delivered into the side tanks to the forward deep tanks?

THE COURT: Not proper rebuttal. It's been covered.

MR. DALY: That was a question raised--

THE COURT: It's been asked and answered.

MR. DALY: That was a question raised by Captain Neal, your Honor.

THE COURT: I say it's been asked and answered.

MR. DALY: I have no further questions, your Honor.

I will add this, that there was a late exhibit to be provided by the Coast Guard. I believe that exhibit has arrived. It was an exhibit that the Coast Guard counsel said he would try to produce. The exhibit wasnot available from official records at the time the defendants took Commander Cronk's testimony in Washington.

It has now been produced.

THE COURT: Photostatic copy of a report?

MR. DALY: It is a copy of the report and also the master's extended marine protest which was made a part of the report.

We had the report, but the master's marine extended protest was not available except from archives, and so they were finally obtained from Coast Guard archives.

I suggest that this report be, or this exhibit be marked 53A.

The investigative report without the marine extended protest is 53.

MR. WAESCHE: I have no objection.

THE COURT: All right. Received, 53A.

xx (Plaintiff's Exhibit 53A received in evidence)

CROSS-EXAMINATION

BY MR. WAESCHE:

Q Do you recall testifying last Monday?

A Absolutely.

Q And did you testify last Monday that the so-called leak tank was situated between the lower level and the tank tops?

A Right.

Q And did you further testify last Monday that at

least you had no difficulty whatsoever seeing through the floor plates and observing that leak tank?

A Not on the first of April, absolutely not. I did not testify to that at all.

Q You did not?

A Not on the 1st of April. You never asked me a date, sir.

Q Excuse me. The 1st of April? I'm talking about your testimony last Monday.

A You said whether or not I testified that - you are referring to the 1st of April, I presume, now. There is no difficult at all if the ship is clean and if there is no water or oil underneath the floor plates. But there is a great difficulty if there is.

Q My question is, did you not testify last Monday that you went aboard the Trade Daring after the fire and had no difficult at that time observing the leak tank which was located between the lower level and the tank top?

A Would you please specify the time you are referring to.

Q Whenever you went aboard the ship.

A I went several times aboard.

THE COURT: After the fire?

A Several times after the fire, your Honor.

Q So did Mr. Halboth, didn't he?

A Is that a question, sir?

Q Yes, it is.

A I have seen him only on the 1st of April.

Q Now, the difference in the ullage, that is, the ullage in the side tanks which was read by Mr. Halboth as being below the level of the overflow, you state can be accounted for if the temperature in the side tank rose from 45 to 85 and 95 degrees, is that correct?

A I believe that is correct.

Q Do you have any basis for stating that in fact the temperature in those tanks would raise from 45 to 95?

A From what I have seen on board the vessel, I believe that you would have that raise at least, sir.

Q What is there that you saw aboard the vessel that leads you to that conclusion?

A The general damage around the tanks, both inside the engine room and outside the engine room, as well as the deck on top of the tanks. There was heating on all sides.

Q Is it not a fact that the paint on the bulkhead wall, that is the bulkhead wall of the engine room that formed the common wall of the diesel oil side tanks,

was merely scorched, wasn't even burned off?

A Please repeat what you say.

Q Yes. Is it not a fact that the paint on the bulkhead in the engine room which formed the partition between the side tanks and the engine room were not even burned off but merely scorched?

A The partition on the starboard tank, you are talking about?

Q The side tanks.

A The starboard one or both? There are two side tanks.

Q Let's take both.

A Both, no, that is not correct.

Q Which one?

A The starboard one was much less burned than the port one.

Q Am I right then at least with respect to the starboard one, the paint was not even burned off the wall?

A I believe you are referring to the gas-oil tank.

Q No, I am referring to the side tank.

A I'm afraid the gas-oil tank is the paint that was not burned.

Q You disagree with my statement?

A I'm quite sure I disagree with your statement.

Q Is it not also a fact that the common wall between the tank - I'm talking now about the side tanks -- and the engine room only covered one, fairly relatively, portion of the side tank; in other words, the other walls of the side tank were not common with the engine room?

A The other sides of the side tank were not common with the engine room? That is not entirely so. The side tank is bounded by, let us take the port side tank, it is bounded by the side shell on the outside, it is bounded by a bulkhead between the pump room and the engine room, the pump room and the tank in itself.

Q Yes.

A On the forward end. It is bounded on the starboard side by portions of day tanks, settling tanks, and it is bounded on the after side by portions of the engine room and the heavy fuel tank. That is the port tank.

Q How much of, what percentage of the wall in the starboard side tank is common with the engine room bulkhead?

A I haven't calculated that. I could if you so wish.

Q Just roughly.

A I won't venture a guess right now.

Q 25%?

A I don't know. That is your guess.

Q You won't venture a guess at all?

A No, I won't without calculating.

Q All right. Let's do it with the port. What portion of the wall, walls of the port side tank, are common with the bulkhead in the engine room?

A With the exception-- if you change the heavy fuel tank into the gas-oil tank, you have got approximately the same setup on the starboard tank as you have on the port tank.

Q So therefore just one section on either tank has a wall which is common to that of the engine room?

A That is correct.

Q Now, with respect to both of the side tanks, one wall is actually the skin of the ship, is it not?

A One wall is the skin of the ship which was damaged.

Q The skin of the ship which is also immersed in water?

A Only a small portion of it is immersed in water.

Q Gut the portion of that wall on the side tank that forms the skin of the ship would be directly in the

water, wouldn't it?

A And a portion of it, the upper part of it was damaged and distorted, steel distorted, which was three-quarters of an inch or half an inch, and the deck on top of those side tanks was also distorted and buckled.

Q What was the draft aft at the time; do you have any idea?

A No, sir, I don't.

Q So if you have no idea of what the draft is, you don't know what portion of the tank was actually not in the water itself, but a portion of the side which formed it was in the water?

A I'm assuming, because the ship had just discharged cargo, she was light; the vessel being light, naturally is high above the water. Now what the exact draft was, I couldn't tell you.

Q So therefore you can't tell me what portion of the tank--

A No, that is why I wouldn't venture any guesses before.

Q What leads you to believe, given all of these factors, that the temperature in the tanks would reach 95; is it just a guess on your part?

A Because that is a hot day in New York, when the sun is shining, and when a fire is on board the ship, I would imagine that would go higher than 95 degrees.

Q I'm sorry?

A I say that is a hot day in New York, it's probably 95 out right now, and if you get a fire on a vessel, you get steel -- which is a very good conductor of heat, as you well know, and you know howfast it goes up.

Q You have to transfer thisheat to a liquid and then bring that liquid up to the temperature, don't you?

A Absolutely. The volumetric expansion on the one tank was 2% and the other tank was less than 2%, that I consider minimum, sir.

Q You mean assuming that your theory is correct?

A My figures are right. Whether the temperatures are right or not, if they have reached that, that is open to argument, but my figures as to the volumetric expansion are correct.

Q I don't doubt that.

A Thank you, sir.

Q I'm merely questioning your accuracy with respect to the temperature rise.

A It is my best judment that in a fire of that size and that extent in time, it would be easily reached, the temperatures I quoted would be easily reached. That is my best judgment.

Q And what expertise do you have in that particular field?

A A few burned wrecks that I saw and the tables I have used and the general feeling of the situation after looking at the vessel.

MR. WAESCHE: I have no further questions.

THE COURT: All right.

MR. WAESCHE: May I confer with Captain Neal for just a minute?

THE COURT: Yes, sure.

(Pause)

MR. WAESCHE: I have no further questions.

However, your Honor, as a result of this, I would like Captain Neal to take the stand for just one or two questions. Just on this one point.

THE COURT: Mr. Daly, do you have any questions?

MR. DALY: I think I must object to that. We have been trying to expedite things. Captain Halboth's testimony was in. Apparently this is going to be an

elaboration of Captain Halboth's testimony on the bunkers, tanks and the levels. I see that it serves no purpose, your Honor.

May I ask for an offer of proof-- is this in connection--

THE COURT: Do you have any other questions, that is the point first.

MR. DALY: No further questions.

THE COURT: Step down.

(Witness excused)

THE COURT: Offer of proof, what is he going to tell me?

MR. WAESCHE: Your Honor, he is going to tell you that in his opinion, although he cannot be exact about it, his belief is that the temperature in those tanks would rise 20 degrees, no more.

THE COURT: Can't we stipulate that if he is called that is what he would testify to?

MR. DALY: I will stipulate that, your Honor.

MR. WAESCHE: Fine, your Honor.

THE COURT: All right.

Both sides rest.

MR. WAESCHE: And with a raise of 20 degrees, you wouldn't get it coming up, going over, you wouldn't

get that expansion.

MR. DALY: That part I don't stipulate to, your Honor.

MR. WAESCHE: Well, all right.

THE COURT: All right, both sides rest?

MR. DALY: Yes, your Honor.

THE COURT: Both sides are at rest, I should say.

All right, gentlemen, somewhere along the line, I'm going to expect some post-trial findings from you.

MR. WAESCHE: Yes, your Honor.

MR. DALY: Because of the complexities involved and so much of this is technical, I would request the Court to permit us to file those after we have the transcript of the trial.

THE COURT: How long is it going to take you after the transcript?

MR. DALY: Well, again, in view of the technicalities of it, I would say I probably need a month.

THE COURT: All right.

MR. WAESCHE: A month after receiving the transcript.

THE COURT: A month after receiving transcript.

MR. DALY: Shall we exchange briefs at that time and then answering briefs?

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